THE PREDICTION OF STAFF BURNOUT INDICATORS IN IDD COMMUNITY SERVICES BY STAFF DEPRESSION, WORK FUNCTIONING, AND WORKING ALLIANCE

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ABSTRACT

I examined how burnout indicators for DSPs are impacted by the presence of certain intrapersonal and interpersonal resources. Based on the job demands-resource model of work stress (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), it was hypothesized that depression, work functioning problems, and working alliance would all impact burnout indicators for DSPs uniquely. It was also hypothesized that working alliance would interact with depression and work functioning problems to moderate their impact on emotional exhaustion. Participants were 201 direct service professionals (DSPs) who completed the surveys at a one-day training event. Regression models showed that depression, working alliance, and work functioning problems each have significant and unique impact on burnout, though they affected different indicators within the burnout model. Results also showed that there was no interaction effect for working alliance. Depression significantly predicted emotional exhaustion, depersonalization, and personal accomplishment. Depression was the best predictor of emotional exhaustion. Work functioning problems significantly predicted emotional exhaustion and depersonalization, and was the best predictor of depersonalization. Working alliance significantly predicted depersonalization and was the best predictor of personal accomplishment. These results of this study offer evidence of the impact of the DPS-client relationship on personal accomplishment and introduces working alliance to this field of study. Implications for how to help DSPs manage burnout symptoms are discussed, along with suggestions for future research.
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CHAPTER 1

INTRODUCTION

Approximately four million Americans have an intellectual or developmental disability (IDD; The Administration on Intellectual and Developmental Disabilities, 2013). Many of these individuals live in residential settings where the majority of their care is provided by direct support professionals (DSPs; Larson, Ryan, Salmi, Smith, & Wuorio, 2011). DSP is a title that encompasses a broad range of responsibility within organizations (Hewitt & Larson, 2007), but as the name implies they work directly with individuals with IDD in a supportive role (Taylor, Bradley, & Warren, 1996). The hiring, retention, and training of DSPs has been a problem for decades and has more recently received state and private funding as well as congressional attention (Hewitt & Larson, 2007). A national survey in 2004 reported that the vast majority of responding states (35 of 44) see the high rate of DSP job vacancies as a serious problem impacting the states’ ability to provide adequate community supports (Harmuth & Dyson, 2004). Employee turnover in particular has negative consequences for DSPs, the individuals they serve, and their organizations (Harmuth & Dyson, 2004). The cost to replace DSPs who turnover may be as high as $784 million per year. Understanding the multifaceted causes of poor DSP retention is critical to the field.

Workplace stress has been identified as one of the main causes of attrition, including intention to resign and actual employee turnover for this population (Hatton, Emerson, & Rivers, 2001), which may lead to poor health outcomes for both DSPs and individuals with IDD (White, Edwards, & Townsend-White, 2006). The most widely measured work stress variable in the DSP literature is burnout (see for review Skirrow & Hatton, 2007). Developed by Freudenberger (1974) and Maslach (1976), burnout is a construct of work-related stress. Maslach and
colleagues (2001) described burnout as having three indicators starting with emotional exhaustion, leading to depersonalization of the consumer, and finally resulting in a decreased sense of personal accomplishment for the worker. Burnout, then, is unique from general work strain in that it is concerned not just with the emotional exhaustion, but also the emotional and behavioral consequences of prolonged exhaustion (Thomas & Rose, 2010).

Statement of the Problem

This study was designed to examine important variables related to burnout indicators in DSPs, who are an important population to study because they have been described as the linchpin (Rice & Rosen, 1991) and the backbone (Larson, Hewitt, & Anderson, 1999) of service provision for individuals with IDD. DSPs are also very important to the individuals with IDD that they serve (Asselt-Goverts, Embregts, & Hendriks, 2013). Burnout has been critical to understanding the problems that DSPs face in caring for individuals with IDD and has been linked to the high turnover rates that are plaguing the field and putting DSPs and individuals with IDD at risk for increased health concerns. The field of ID services and DSPs need a better understanding of how burnout indicators affect DSPs who are at the core of the service provision system.

Theoretical Model

The theory that grounded the present study was the job demands-resource model of work stress (JD-R; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Demerouti et al. (2001) suggested that job stress could fall into one of two major categories: job demands and job resources. Job demands are any task that requires the worker to expend physical or mental energy to accomplish. Job resources are any aspect of the job or work environment that allow the worker to meet the demands of the job. They suggested that when demands exceed resources,
work stress and eventually burnout ensue. This theory was important to the present study because although the job demands were implied in this study based on previous research, job resources were explored.

**Empirical Model**

Researchers have demonstrated that DSPs are at greater risk for burnout when they lack certain intrapersonal and interpersonal resources (Ahola et al., 2005; Ahola et al., 2014; Gray-Stanley & Muramatsu, 2011; Jenkins et al., 1997; Mutkins et al., 2011). Intrapersonal risk factors include depression and anxiety (Aitkens & Schloss, 1994; Mutkins et al., 2011), poor coping skills (Mitchell & Hastings, 2001), and certain personality traits such as neuroticism (Chung & Harding, 2009). DSPs with these risk factors have fewer psychological and emotional resources with which to cope with the demands of their job. In the present study, the depression subscale of the Treatment Outcome Package (TOP; Kraus, 2007) was used to measure intrapersonal resources. This subscale measures subjective distress, cognitive and physiological symptoms of clinical depression, and cognitive and physiological symptoms common to a number of anxiety disorders (Kraus, 2007). Depression has been shown to affect all three subscales of the MBI (Schaufeli & Enzmann, 1998).

Researchers have demonstrated that work-related interpersonal resources also affect burnout for DSPs. Work-related interpersonal resources include social support from colleagues and supervisors (Gil-Monte & Peiro; Shaddock et al. 1998). More research has been conducted in other populations of employees as well. Lee and Ashforth (1996) reviewed 13 studies and found that supervisor support accounted for as much as 14% of the variance on emotional exhaustion scores. Colleague and supervisor support were significant predictors of all three subscales of burnout. These work-related interpersonal resources are important to understanding
DSP burnout and was measured in the present study by the work functioning subscale of the TOP. The work functioning scale has three items about interpersonal challenges at work, one item for work absences, and one item about level of excitement about work. Work-related interpersonal resources have been shown to be related to all three subscales of the MBI (Lee & Ashforth, 1996).

The key issue that is often left out in the analyses is the quality of the DSP’s relationship with the client. Understanding how this primary relationship affects DSP burnout is critical. Hastings (2010) – a leader in the field of burnout for DSPs—called our collective understanding of the relationship between DSPs and individuals with IDD underdeveloped. Hastings argues that many of the variables used to examine the interpersonal factors have focused on one part of the dyad instead of both. In the present study, The Working Alliance Inventory-Short Form (Tracey & Kokotovic, 1989) was used to measure the quality of the relationship because of the unique way that the items focus on the interpersonal. The Working Alliance Inventory-Short Form measures three components of the working relationship: agreement on goals, agreement on tasks to achieve those goals, and the emotional bond between DSP and client.

Burnout indicators in this study were measured using the Maslach Burnout Inventory-Human Services Survey (MBI-HS; Maslach & Jackson, 1986). The MBI-HSS is the standard measure of work stress for the population in this study (Hastings, Horne, & Mitchell, 2004; Skirrow & Hatton, 2007). The MBI-HSS is well suited for studying stress in DSPs because the theory suggests that the worker will not have the resources to meet the demands of the job (Hastings et. al, 2004). Hastings et. al (2004) also noted that the MBI-HSS makes sense for this population because of the expectation that burnout will impact the clients of DSPs as well.
The MBI-HSS was also appropriate for the present study because the subscales are intrapersonal and interpersonal in nature. Emotional exhaustion and personal accomplishment are intrapersonal experiences and depersonalization is interpersonal in nature. In this study, I examined the impact of selected intrapersonal and interpersonal resources on burnout indicators. I hoped to show whether intrapersonal and interpersonal resources affect intrapersonal and interpersonal indicators of burnout. The following empirical model is proposed:

![Empirical Main Effects Model](image)

*Figure 1-1. Empirical Main Effects Model*

**Working Alliance as Moderator**

A new variable to the field of ID services was examined in this study: working alliance (Bordin, 1979). The Working Alliance Inventory Short Form (WAI-S; Tracey & Kokotovic,
Working alliance, a hugely important construct in psychotherapy research (Castonguay et al., 2006), has only the sparsest of research studies in the field of ID services (Roeden & Maaskant, 2011; Strauser et al., 2004), despite a clear need for more research on the interpersonal factors related to DSPs (Hastings, 2010). Researchers have demonstrated in studies and meta-analyses that working alliance accounts for 20-30% of the variance in psychotherapy outcome with an effect size of between .22-.26 (Castonguay et al., 2006). Working alliance is examined in this study to bring this robust and important construct to the field of ID services in general and DSP burnout more specifically.

I also explored in what way working alliance impacts burnout by examining the interaction effect. Previous studies have identified client-DSP interpersonal correlates of burnout such as positive client interaction (Lawson & O’Brien, 1994), experienced safety, and patient cohesion and mutual support (Rose et al., 2013). I examined whether working alliance acted as a buffer—moderating the impact of intrapersonal resources and work-related interpersonal resources on DSP burnout. Research has demonstrated that work-related interpersonal variables and intrapersonal variables do impact burnout, which made the moderation effect in this study feasible. Although the sample size was large in the present study, the chances of type I error was too high for all three subscales of the MBI to be used in the moderation analysis. Emotional exhaustion, which is the first stage of the burnout process (Maslach & Jackson, 1993), will be used in the moderation analysis. Emotional exhaustion is also considered the most indispensable indicator of burnout (Chao, McCallion, & Nickle, 2011; Dyrbye, West, & Shanafelt, 2009; Hastings, 2004; Schaufeli, Bakker, Hoogduin, Schaap, & Kladler, 2001). The following moderation model was proposed:
Research Questions

In the current study, the following research questions were examined:

Research Question 1: To what extent do depression, work functioning problems, working alliance, and the interaction of depression and working alliance influence emotional exhaustion while controlling for demographic variables?

Research Question 2: To what extent do depression, work functioning problems, working alliance, and the interaction of work functioning and working alliance influence emotional exhaustion while controlling for demographic variables?
Research Question 3: To what extent do depression, work functioning problems, and working alliance influence depersonalization while controlling for demographic variables.

Research Question 4: To what extent do depression, work functioning problems, and working alliance influence personal accomplishment while controlling for demographic variables.

**Hypotheses**

Hypothesis 1: Intrapersonal resources, as measured by the depression subscale of the Treatment Outcome Package (TOP), will positively predict DSP emotional exhaustion, depersonalization, and negatively predict personal accomplishment, as measured by the MBI.

Hypothesis 2: Work-related interpersonal resources as measured by the work functioning subscale of the TOP will positively predict DSP emotional exhaustion and depersonalization, and negatively predict personal accomplishment as measured by the MBI.

Hypothesis 3: Client-DSP interpersonal resources, as measured by the WAI-SR will negatively predict DSP emotional exhaustion and depersonalization, and positively predict personal accomplishment as measured by the MBI.

Hypothesis 4: DSP report of working alliance will moderate the relationship between DSP depression, and work functioning, and DSP emotional exhaustion.

**Significance of Study**

The purpose of this study was to better understand how the relationship between individuals with IDD and their DSPs impacts DSP burnout indicators. The study was significant
because DSPs burnout at a high rate and burnout indicators have been connected to a host of negative effects for DSPs, their organizations, and in turn the individuals they serve (see for review, Skirrow & Hatton, 2007). If the quality of the relationship buffered against the effects of burnout, even though other risk factors are present, this would provide preliminary evidence that more emphasis should be focused on the relationship between IDDs and DSPs.

This study was also significant because working alliance was examined, which introduced this construct to the field of ID services. Working alliance is an important construct with an enormous literature base in the field of psychotherapy but it has not been studied much in individuals with IDD or in terms of its relationship to burnout. Working alliance research has focused almost exclusively on the impact that alliance has on the client or recipient of services. Very few studies have examined how the strength of the working alliance affected the counselor or service provider. Results from this study could also provide information about the impact of working alliance on service providers in general and DSPs specifically.

Working alliance may be a useful construct for training DSPs as well. There is evidence that working alliance can be taught—particularly the task and goal components (Crits-Christoph et. al, 2006). If DSPs can acquire the skills necessary to provide a strong therapeutic alliance with their clients, quality of life may improve for DSPs and individuals with IDD alike.

Limitation
There were several limitations that should be noted in this study. The sample for this study was taken from one training event in Central Pennsylvania. Although the sample size is relatively large, it is neither a random nor a representative sample. It is a sample nested in a particular part of the country. One particularity is that, though a rural area, this sample was taken from an area
near a major university. This may be why the sample has a more highly educated workforce than is typical of DSP samples (Krahn, Hammond, & Turner, 2006).

This study used archival self-report survey data, which has been shown to be subject to monomethod bias (Vaux & Briggs, 2006). There were no other methods of data collection (e.g. observation data) used in this study. Some shared variance should be expected when all the data comes from a single source.

Another limitation of this study was a lack of control for social desirability. It is plausible that some of the DSPs who filled out these questionnaires were influenced by a desire to appear more socially or professionally acceptable, which may have skewed the results (Lounsbury, Gibson, & Saudargas, 2006). Because this was archival data, there was no way to control for social desirability.

Another limitation was the lack of organizational variables. In this study the interpersonal work-related variables were examined despite a lot of evidence that other work-related variables were also important. Researchers have found a consistently strong correlation between organizational variables and burnout in both the general burnout literature (Schaufeli & Enzmann, 1998) and literature specific to DSPs (Skirrow & Hatton, 2007; Thompson & Rose, 2011). Organizational variables include types of job resources that DSPs have such as adequate pay or job training, perceptions of DSPs about their work environment or workload, role ambiguity, work burden, and conflict at work (see for review, Skirrow & Hatton, 2007; Thompson & Rose, 2010). Measures used to study organizational variables have varied greatly from study to study but have shown consistent and robust correlation with burnout indicators. While it is impossible to include all of the organizational variables in the literature into one
study, it would have made the study stronger if other organizational variables were present in the data set.

**Definitions**

Key terms as described in this study are defined below.

**Intellectual and Development Disabilities (IDD)**- As defined by the American Association on Intellectual and Developmental Disabilities (AAIDD; Schalock et. al, 2010) intellectual disability is “characterized by significant limitations both in intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18.” Developmental disability is an umbrella term that includes intellectual disability as well as other conditions such as cerebral palsy that are more physical in nature. Because intellectual disabilities and developmental disabilities often co-occur, IDD is a term that covers both groups for the professionals who work with these groups.

**Intellectual Disability Services**- The name for the system that provides care for individuals with IDD (see for example; http://www.dhs.pa.gov/)

**Direct Support Professionals (DSPs)**- According to the National Association of Direct Support Professionals (NADSP) a DSP is a professional role with the purpose of “assisting individuals to lead a self-directed life, and contribute to his/her community; and encourage attitudes and behaviors that enhance inclusion in his/her community (Taylor et. al, 1996).” DSPs work in homes, residential programs, work shelters, and many other settings as needed. There are an estimated 625,000 DSPs supporting individuals with IDD in the United States (Hewitt & Larson, 2007).

**Intrapersonal**- Refers to variables occurring within the individual.
**Working Alliance**- describes the relationship between a professional and a client characterized by (1) agreement between the two on the goals of their work together, (2) agreement about the tasks that make up their work together, and (3) the strength of the relational bond between the two (Bordin, 1979). The Working Alliance Inventory-Short Form (Tracey & Kokotovic, 1989) will be used to measure working alliance in this study.

**Depression**- According to the Diagnostic and Statistical Manual of Mental Disorders 5th Edition (DSM V; American Psychiatric Association, 2013), the common features across all depressive disorders are “the presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual’s capacity to function. Depression will be measured by the depression subscale of the Treatment Outcome Package (TOP; Kraus, Seligman, & Jordan, 2005)

**Burnout**- prolonged job stress in which demands of a job exceed resources to meet those demands (Maslach et. al, 2001). Burnout has three indicators: (1) emotional exhaustion, (2) De-personalization of client , and (3) diminished personal accomplishment (Maslach et. al, 2001). Burnout will be measured in this study by the Maslach Burnout Inventory (MBI;). All three subscales were used in the main analysis, but only the emotional exhaustion subscale was used in the moderation analysis.

**Challenging Behavior**- CBs are behaviors that because of their intensity, frequency, or duration threaten the quality of life or safety of the individual or others and often lead to restriction or exclusion (Banks, Bush, & Baker, 2007). The major types of CBs include self-injurious, aggressive, threatening, destructive, and anti-social behaviors (Bush, 2012). In this
study, participants were asked to think of a client whose behavior they found challenging as they answered the survey questions.

**Organizational Variables** - an umbrella term used to describe the many ways that the relationship that DSPs have with their employment organization can affect their level of burnout (Skirrow & Hatton, 2007; Thomas & Rose, 2010). One type of organizational variable, a work-related interpersonal variable, was measured in this study using the work functioning subscale of the TOP.

**Interpersonal Variables** - a term to describe variables nested in the relationship between DSPs and individuals with IDD or DSPs and colleagues at work. The two interpersonal variables in this study were measured by the working alliance inventory short form and the work functioning subscale of the TOP.

**Work Functioning** - is a subscale of the TOP (Krauss et. al, 2005). Work functioning has 5 items, 3 of which are interpersonal (e.g. Had conflict with others at work regardless of fault). A higher score on work functioning indicates poorer work functioning. When discussing work functioning in this study, the term “work functioning problems” was used for clarity.
CHAPTER 2

REVIEW OF LITERATURE

History and Background

There are an estimated 625,000 DSPs serving individuals with IDD in the United States (Hewitt & Larson, 2007). The role of DSP is in some ways similar to other career roles such as parents, nurses or counselors. DSPs provide a service in a professional role in which their main function is to tend to the welfare of their client. The National Association of Direct Support Professionals defines the role as one in which the DSP supports individuals to live self-directed lives integrated into community living (Hewitt & Larson, 2007). Because the field of residential/community care in which DSPs function has undergone significant legislative and practical changes, DSPs face many challenges to achieve their goals.

The Olmstead decision reached by the United States Supreme Court (Olmstead et al. v. L.C. et al., 1999) mandated the deinstitutionalization of individuals with IDD. Service providers responded by rapidly opening residential programs for these individuals. Many people with IDD were previously treated in large institutional facilities, but now many individuals with IDD are served in smaller residential homes staffed by direct service providers (Mansell, McGill, & Emerson, 2001). The changes in care were enacted to allow individuals with IDD to be more integrated and included in the community and live with much greater personal autonomy, but changing living arrangements was not enough to achieve these goals (Krahn et. al, 2006).

Health care providers in the community tend to have less training in working with individuals with IDD compared to health care providers in institutional settings. Health care providers who work for institutions tend to specialize in care for individuals with IDD. In the community, health care providers tend to have less training and expertise with individuals with
IDD. This lack of training leads to poorer health outcomes for individuals with IDD (Krahn et al., 2006). Agencies that provide housing and care staff have also struggled with the many challenges of supporting individuals with IDD (Kormann & Petronko, 2004) and some have argued that they were just not prepared for the complex challenges of supporting individuals with intellectual disabilities (White et. al, 2006). Difficulty in the hiring, training, and retention of direct support professionals is another problem (Larson, Lakin, & Hewitt, 2002).

DSP is a job title that encompasses and requires worker roles in a variety of settings, including the consumer’s home, residential day programs, and employment training programs (Hewitt & Larson, 2007). Because policy makers have tended to view the DSP position as requiring little skill (Hewitt & Larson, 2007) the way that DSPs are recruited, trained, and compensated reflects that standard. Service providers in these settings have little preparation for a very difficult job environment. DSPs tend to have little post-secondary education (Krahn et al., 2006) and earn wages in the lowest hourly wage quartile, while filling a wide variety of roles (e.g. behavioral support, nutritional support, recreational supervision, etc.) for individuals who often have complex needs and impairments (Saunders, 2007; White et al., 2006). Agencies that provide these services are faced with the dual challenge of preparing DSPs to provide excellent care and to simultaneously address attrition and high rates of employee turnover, which is common in the field.

Workplace stress has been identified as one of the main causes of attrition, including intention to resign and actual employee turnover for this population (Hatton et. al, 2001). White et. al (2006) identified the trickle-down-effect of DSPs and individuals with IDD who bear the brunt of the problems with the IDD service system. In other words, failures on a structural level
to prepare and train DSPs for the complicated work they do has led to poor health outcomes for individuals with IDD and DSPs.

**The Importance of DSPs for individuals with IDD**

Research supports what may be obvious to those who work with individuals with IDD: the relationship between individuals with IDD and their staff is important (Asselt-Goverts et. al, 2013; Buntinx & Schalock, 2010; Hastings, 2010; Widmer, Kempf-Constantin, Robert-Tissot, Lanzi, & Carminati, 2008). Sociological studies show that the social networks and social capital of individuals with IDD are different from the general public (Asselt-Goverts et al., 2013; Widmer et al., 2008). Widmer et al., (2008) conducted a study on family social capital for individuals with intellectual disabilities. Compared to a control group of graduate students, individuals with intellectual disabilities rated themselves as less central and more disconnected from their families. Widmer and colleagues (2008) also found that individuals with intellectual disabilities do not tend to have other sources of social capital such as partners or children. Given this finding, it is fair to expect that the relationship with DSPs would take on special significance.

Asselt-Goverts et al. (2013) conducted a study on the social network of individuals with mild intellectual disabilities who had been living independently in the community for at least two years. They found that for these individuals, professional caregivers comprised about 25% of their social network. Compared to family members and acquaintances, individuals rated their support staff higher in terms of affection and preference. Compared to their relationships with family members, individuals with mild intellectual disabilities also rated their support staff higher in terms of practical support. These findings indicate that the relationship between caregivers and individuals with IDD takes on special significance for the individuals with IDD,
which may make stress and turnover in DSPs all the more detrimental. There is also evidence that the well-being of DSPs impacts the quality of care that individuals with IDD get (Rose, Jones, & Fletcher, 1998).

**Challenging Behaviors**

Challenging behaviors (CBs) further complicate provision of services to individuals with IDD (Mansell et al., 2001) and are the most commonly reported source of stress for DSPs (Hastings, 2002). CBs are behaviors that because of their intensity, frequency, or duration threaten the quality of life or safety of the individual or others and often lead to restriction or exclusion (Banks et. al, 2007). The major types of CBs include self-injurious, aggressive, threatening, destructive, and anti-social behaviors (Bush, 2012). In a total population survey in the UK, Emerson and colleagues (2001) found that challenging behaviors were present in 10-15% of those individuals engaged in formal services for IDD. They put CBs into 4 categories for the purpose of the study: aggression, self-injury, destructive behavior, and other challenging behaviors. The “other” category had the highest prevalence (9-12%), followed by aggression (7%), destructive (4-5%), and self-injury (4%). Bush (2012) emphasizes, CB is not a label or a diagnosis but a problem rooted in the system of care for individuals with IDD. Emerson and Einfeld (2011) emphasize that CBs understood in their context are often quite understandable and adaptive behaviors. In other words, it is the situation that is challenging and the behaviors develop, are maintained, or are increased in response to the situation. CBs emerge from an interaction between individual factors and environmental factors, which means that some of the responsibility for addressing CBs falls to the service providers and provider organizations (Bush, 2012). Service providers and organizations also experience the consequences of their role in the CB system (Emerson & Einfeld, 2011).
CBs affect each part of the service provision system: the organizations, the DSPs, and the individual with IDD. In their review of the literature on disparities of care between the general population and individuals with IDD, Krahn and colleagues (2006) identified treatment for CBs as one of the main areas where community providers have not consistently improved care for individuals with IDD. In other words, by many measures, quality of life has improved for individuals with IDD in smaller community settings. Dealing with CBs, however, is not one of those and the effects of CBs on individuals with IDD are significant.

**Effects on IDD.** The restrictions and exclusions mentioned in the definition of CB, lead to a decreased quality of life for individual with IDD (Emerson & Einfeld, 2011). There are both immediate physical and health consequences and ongoing social and quality of life consequences of challenging behaviors on individuals who engage in them. Immediate consequences are related to the act itself, such as bodily injury, physical impairment, or as consequences of restraints used by care staff (Emerson & Einfeld, 2011). Social and quality of life consequences are prevalent and can be even more damaging. Individuals who engage in challenging behaviors are more likely to be abused (Rusch, Hall, & Griffin, 1986), get more negative and less positive attention from staff (Lawson & O’Brien, 1994), get prescribed more psychotropic medications with difficult side-effects, and get excluded from community integration (Emerson & Einfeld, 2011). Rather than receiving effective support for challenging behaviors, individuals with IDD are treated in such a way so as to maintain the challenging behaviors (Hastings & Remington, 1994). CBs have also been linked to a breakdown of placement (i.e. community placement failing) for individuals with IDD (Broadhurst & Mansell, 2007).

**Effects on DSPs.** Research has not established a direct causal relationship between challenging behavior and organizational costs (Hastings, 2002). Understanding the effect of
challenging behavior on organizations requires an understanding of how challenging behavior affects the individuals who come into contact with the challenging behavior. Intervention research on CBs has focused on two main processes: (1) treating the challenging behavior with behavioral methods and (2) dealing with the effects that the CBs have on staff (Hastings, 2002). Studies have demonstrated that CBs have a negative impact on DSPs leading to higher employee turnover and absenteeism (Rose et. al, 1998). Turnover and absenteeism represent a huge cost of organizations.

Research is clearer on the effects of challenging behavior on DSPs. Studies have found a direct link between challenging behavior and negative emotional responses (Bailey, Hare, Hatton, & Limb, 2006; Bromley & Emerson, 1995; Gray-Stanley et al., 2010; Mills & Rose, 2011; Mitchell & Hastings, 2001; Zijlmans, Embregts, Bosman, & Willems, 2012) though evidence of a direct link between challenging behavior and burnout is inconclusive. One study found a direct link (Devereux et. al, 2009) and another study found no direct link (Mutkins et. al, 2011). A review of studies from the 1980s and 1990s on the link between challenging behavior and staff stress proposed that the actual link between challenging behavior and staff stress is emotional reactions (Hastings, 2002). Quantitative research has subsequently provided evidence for this link (Gray-Stanley et al., 2010). Exploratory research has also found evidence of the negative effects of CBs on DSPs. Bromley and Emerson (1995) surveyed staff who worked with individuals with IDD and challenging behaviors and found that staff experienced stress related to challenging behavior for a variety of reasons: (a) over time, the cost of caring for someone with CBs proved to be taxing (b) CBs are difficult to understand, (c) unpredictability of CBs, and (d) a difficulty in understanding how to intervene effectively.
Constructs

The following is a review and discussion of the constructs whose variables will be examined in this study: burnout, work functioning, depression, and working alliance.

Burnout Indicators

One way to explore the challenges for DSPs is to understand how stress impacts DSPs. Indeed, there has been much research focusing on the impact of stress for staff and the individuals they serve (i.e., consumers). Survey research has demonstrated that up to 32% of those who work with individuals with intellectual disabilities experience significant levels of stress (Skirrow & Hatton, 2007). Stress for DSPs has also been connected to depression (Aitken & Schloss, 1994; Gray-Stanley et al., 2010), absenteeism, staff turnover, and a host of other deleterious effects (see for review, Skirrow & Hatton, 2007). For consumers, absenteeism and staff turnover in particular have been shown to have a negative impact on well-being (see for review, Hastings, 2002). Other researchers have found that staff under stress have fewer interactions with consumers and what interactions they do have tend to be less positive (Lawson & O’Brien, 1994; Rose et al., 1998). The research is clear that work stress is a serious issue in the field of ID services for DSPs, organizations, and the consumers they serve.

Burnout, a measure of work-related psychological stress, is a conceptualization of work-stress that has been very important in the world of work in general and in DSPs in particular. Stress and burnout, while similar, are not the same. The term “burnout” was originally used to describe work stress by Freudenberger (1974). In their book on burnout, Grosch and Olsen (1994) summarize the history of the concept of burnout. They note that while other definitions have been used over the years, all have their roots in the original Freudenberger definition. Freudenberger, they claim, made two key distinctions about burnout. The first distinction is that
burnout is not just a physical exhaustion from being overworked. The effects of burnout in Freudenberger’s conceptualization cause an “erosion of the spirit” (p. 4) that cannot simply be fixed by a reduction in work hours or a vacation.

The second distinction is that those in helping professions are especially susceptible to burnout because it is often these individuals who start on their career path with high ideals. Pines (1993) identified these high ideals as the major difference between burnout and stress because, although many experience stress in their jobs, those with high ideals experience the erosion of the spirit symptomatic of burnout. Those with high ideals have further to fall, so to speak.

At the same time that Freudenberger was developing his conceptualization of burnout, Maslach (1976) started to write about burnout as well. Maslach, studying emotion in the workplace, conceived of burnout in a slightly different way than Freudenberger (Maslach, Schaufeli, & Leiter, 2001). Maslach et. al (2001) described burnout as prolonged job stress in which demands of a job exceed resources to meet those demands. This conceptualization led to the theory of work-stress called emotional overload theory (Devereux, Hastings, & Noone, 2009).

**Burnout theory.** Emotional overload is a work-stress theory based on Maslach’s theory of burnout (Devereux, et. al, 2009). Maslach originally conceived of burnout as a process that moves from the emotional exhaustion to a poor defensive coping technique (depersonalization) and finally to a loss of a sense of personal accomplishment (Maslach & Jackson, 1993). Burnout, then, is unique from general work strain in that it is concerned not just with the emotional exhaustion, but also the emotional and behavioral consequences of prolonged exhaustion (Thomas & Rose, 2010). The emphasis of emotional overload theory as proposed by Maslach and colleagues is on the interpersonal source of work stress. Especially in human services fields
like ID services, the interpersonal demands of a job can eventually overwhelm coping resources and lead to emotional exhaustion.

By the turn of the century, researchers had broadened burnout to include jobs of all types (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Demerouti et. al (2001) proposed a broader theory to explain burnout which they called the job demands-resource model (JD-R). They proposed that job stress could be categorized into either job demands or job resources. Job demands they define as any job task that requires sustained mental or physical effort, which would be related to emotional exhaustion on the MBI. Job resources are any aspect of a job environment that help the worker to function better on the job, reduce the job demands in some way, or promote personal growth for the worker. According to the theory, job resources should be related to depersonalization on the MBI. Devereux et. al (2009) utilized this theory with a sample of 96 DSPs. They found the work demands were indeed related to emotional exhaustion and that coping skills lessened the impact of work demands on emotional exhaustion. Studies with other populations also supported the two-process nature of burnout described in the JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001; Lee & Ashforth, 1993, 1996).

In both Maslach’s and Freudenberger’s formulations of burnout, the relationship between provider and recipient is the main cause of burnout. Burnout was intended to study the effects of the helping relationship on the helper (Maslach et al., 2001), but the research has indicated that the stressful relationship is not the only cause or correlate of burnout (Schaufeli & Buunk, 2003). The picture of correlates and causes is a much more complex combination of organizational factors, individual factors, and interpersonal factors (Schaufeli & Buunk, 2003; Thomas & Rose, 2010). The theories described above provide an understanding of the process of burnout as it relates to emotional overload, demands, and resources.
DSP burnout. Using the MBI, researchers have identified a host of variables that are related to staff burnout in IDD services. Some of the variables seem to be nested in the interpersonal relationship with the consumer, some in organizational level, and some internal to the DSP. Interpersonal variables—defined here as resulting from some aspect of the relationship between DSP and consumer-- include fear of assault (Rose et. al, 2013), staff perceptions of consumers capability (Phillips & Rose, 2010), staff emotional reactions to challenging behaviors (Gray-Stanley et al., 2010), positive client interaction (Lawson & O’Brien, 1994), patient cohesion and mutual support, experienced safety (Rose et al., 2013), and consumer aggressive behavior (Kozak et. al, 2013). Organizational variables—an umbrella term used to describe the many ways that the relationship that DSPs have with their employment organization can impact their level of burnout (Skirrow & Hatton, 2007; Thomas & Rose, 2010)—include role clarity (Gil-Monte & Peiró, 1996), feedback from supervisors (Kozak et al., 2013), workload, latitude or participation in decision-making (Gray-Stanley & Muramatsu, 2011; Kowalski, Driller, Ernstmann, & Alich, 2010). Intrapersonal variables—variables occurring within the individual -- that have been linked to burnout are demographic variables such as level of education and lack of qualification for ID services (Bailey et. al, 2006; Bromley & Emerson, 1995; Gray-Stanley et al., 2010; Mills & Rose, 2011; Mitchell & Hastings, 2001; Zijlmans et. al, 2012), psychological variables such as depression and anxiety (Aitken & Schloss, 1994), general health and satisfaction with life (Kozak et al., 2013), and coping strategies (Devereux et. al, 2009). These three types of variables merit further exploration because of their significance in the burnout.

Interpersonal Work-Related Variables

Client characteristics, like CBs, are important in understanding DSP burnout, and yet organizational variables are arguably even more important. In fact, Schaufeli & Enzmann (1998)
reviewed 16 studies that measure both to see whether client characteristics or organizational factors have higher correlations. They conclude that organizational factors are more predictive of burnout. One subset of these work-related variables is interpersonal in nature. These variables have been shown to have consistently high correlations with worker burnout. In particular, role conflict and ambiguity, support from colleagues and supervisors, lack of feedback from supervisors, and participation in decision-making all have evidence of high correlations (see for review, Schaufeli & Enzmann, 1998).

Researchers in ID services have also concluded that interpersonal work-related variables are important (see for review Skirrow & Hatton, 2007). In their systematic review, Skirrow and Hatton (2007) captured the important research completed before June 2004. Job resources such as job support, social support, and supervision have all been shown to be related to one or more of the indicators of burnout (Chung, Corbett, & Cumella, 1996; Gil-Monte & Peiró, 1996). Other important variables are related to how DSPs perceive or feel about the organization or their role in it. Variables related to burnout indicators were feeling under benefitted with respect to the organization (Rose, Madurai, Thomas, Duffy, & Oyebode, 2010), negative perceptions of the organization (Blumenthal, Lavender, & Hewson, 1998), and a number of variables related to the job role (e.g. role clarity, Gil-Monte & Peiro, 1998; Blumenthal et al. 1998).

In a systematic review of research between 1990 and 2010, Thompson and Rose (2011) focused on the role of organizational climate as it relates to burnout indicators. They concluded that the level of fit between the DSP and the working environment was critical to reducing burnout. In particular, they found that conflict at work predicted burnout across studies. They also found work social support could moderate the effects of job demands on burnout. Gray-Stanley & Muramatsu (2011) have also demonstrated the importance of work social support in
reducing burnout. Using a sample of 323 DSPs, they found that for DSPs who experienced high levels of work overload, work social support more significantly moderated overload effects on burnout. These studies highlight the importance of interpersonal work-related variables in the burnout equation.

Researchers have also noted some issues with organizational variables in relation to burnout. Thompson and Rose (2011) wrote that one of the limitations of the many studies on organizational variables for DSPs is that organizations vary widely and the variables that researchers have used to explore these also vary greatly. The variety of settings and variables has made it difficult to draw more general conclusions. Schaufeli & Buunk (2003) also note that when multiple organizational variables are included in the same study, they often overlap in terms of the content they are measuring, which is one explanation for the large variance that they account for in burnout scores. It would seem that the field would benefit from a more general measure of work functioning like the one in this study.

**Intrapersonal Variables**

Burnout in the broader literature has been linked with a variety of mental disorders including major depression, dysthymic disorder, and minor depression (Ahola, Honkonen, Isometsä, & Kalimo, 2005), anxiety disorders, and substance abuse (Ahola, 2007). Researchers have not found much to justify a temporal association between these disorders and burnout, suggesting that a bi-directional model is most supported by research to this point (Ahola, Hakanen, Perhoniemi, & Mutanen, 2014; Ahola, 2007).

In the DSP literature, fewer studies have examined mental disorders with respect to this population though not always with a measure of burnout. Mutkins et. al (2011) studied how
stress, depression, and workplace social supports impacted burnout for DSPs. Using a sample of 80 DSPs, the researchers used regression analysis to explore which variables explained the greatest variance for which dimension of burnout. The main findings of the study were that depression and perceived organizational stress accounted for 41% of the variance for emotional exhaustion and 39% of the variance for depersonalization. The measure for depression was the Depression Anxiety and Stress Scale (Lovibond & Lovibond, 1995). This measure has reasonable concurrent validity of .77 correlation with the Beck Depression Inventory (Antony, Bieling, Cox, Enns, & Swinson, 1998), but a better measure might improve the validity of the findings. Additionally, because the sample was not large enough, the researchers were unable to examine more than 5 variables at the same time. Examining multiple variables concurrently may be valuable as the field seeks to understand which variables uniquely predict burnout and therefore merit more attention.

One interesting result that Mutkins and colleagues (2011) found was that challenging behaviors were not correlated with anxiety or any of the other variables in this study. A previous study found a link between challenging behaviors and anxiety (Jenkins, Rose, & Lovell, 1997). Hastings (2002) suggested that lack of correlation with CBs might be because CBs cause an emotional reaction in DSPs that then leads to negative effects for the DSP. This study, however, did not have a measure for burnout and therefore does not add to that knowledge base and the depression measure did not find a significant result. Another limitation of this study was that they did not have any measures to account for any potential external causes of depression. Depression is generally considered complex in its antecedents including genetics, environment, and experiences (Merikangas & Low, 2004). Because of this variety of antecedents, it is prudent in a study of DSP burnout to account for other types of variables alongside intrapersonal
variables. The present study included an intrapersonal variable, an interpersonal variable, and a work-related variable.

Gray-Stanley et. al (2010) also studied how work stress and depression are related. In a study of 323 DSPs, they found a significant correlation between work stress and depression. In a later study by the same first author, Gray-Stanley and Muramatsu (2011) include burnout in their analysis using the same sample, but they did not include depression in this analysis, which leaves the question of the effects of depression on burnout unanswered in this particular study. An earlier study did find a correlation between burnout and depression using the MBI and the Beck Depression Inventory (Aitkens & Schloss, 1994). In this study, 150 individuals who work with individuals with IDD filled out measures of burnout, depression, and state and trait anxiety. Results indicated a small to moderate significant correlation between depression and both kinds of anxiety with all three subscales of burnout.

Taken together these studies lend support to a link between burnout or work stress and mental disorders—particularly depression. This is especially likely because of the connection between these variables and burnout in other populations (see for review Rose, 2011; Schaufeli & Buunk, 2003). Only one study (Mutkins et al., 2011) examined depression alongside the other key variables of work functioning and burnout. More studies are needed that explore this wider constellation of variables to understand which have the biggest impact on burnout indicators for DSPs. Depression appears to be extremely important and is likely linked to DSP stress and burnout, just as it is for employees in other fields (Rose, 2011). In addition to providing more evidence of this correlation among DSPs, the current study attempts to examine possible moderating influences between DSP intrapersonal risk and burnout, such as quality of the relationship between DSP and consumer: specifically, the working alliance.
Working Alliance

Alliance is a term that refers to a variety of constructs because the theoretical and research community has not yet agreed on one definition (Horvath & Bedi, 2002). Horvath and some of his colleagues have written the seminal meta-analytic reviews of alliance in psychotherapy research and practice (Horvath et al., 2011). They note that the two most influential alliance theorist, Luborsky (1976) and Bordin (1979), started developing their ideas within the same decade though neither of them posited a firm definition. Luborsky’s conceptualization included 2 phases of alliance. During the first phase, the client would come to believe in the psychotherapist’s ability to help and develop trust in his or her warmth and caring. In the second phase, the client would invest in the therapeutic process itself. Luborsky’s conceptualization focused on the alliance from the perspective of the client. In contrast, Bordin’s conceptualization emphasized the interpersonal nature of the alliance—what he called the working alliance. His conceptualization had three components: (1) agreement between therapist and client about the goals of therapy, (2) agreement about the tasks that make up therapy, and (3) the bond between therapist and client. These two conceptualizations led researchers to create over 30 different measures of alliance. By far the most commonly used measures are the California Psychotherapy Alliance Scale, Helping Alliance Questionnaires, Vanderbilt Psychotherapy Process Scale, and Working Alliance Inventory with the common core concept from them being “confident collaborative relationship” (Hatcher, Barends, Hansell, & Gutfreund, 1995; Hatcher & Barends, 1996).

Castonguay et. al (2006) summarized key findings from the literature on alliance. Among their findings are (1) alliance impacts outcome for clients, (2) alliance quality correlates with client characteristics and behaviors (both positive and negative), and (3) alliance also
correlates with therapist characteristics and behaviors. Horvath and Bedi (2002) discuss more in depth about the general themes with regard to important client and therapist variables. Client variables that impact alliance are the severity of impairment of the client and type of disorder. The greater the pre-treatment impairment the weaker, in general, is the alliance. They also note that type of disorder negatively impacts alliance with clients with personality disorders and clients with significant health, legal, economic, or social challenges. Therapist variables of importance on the positive side are interpersonal skills such as an open communication style and ability to communicate empathy. On the negative interpersonal side, therapist who offer insight or interpretation too soon, who convey irritability, and who have a take charge attitude. More recent research has confirmed the importance of therapist interpersonal style on alliance—particularly the cold/detached interpersonal style (Hersoug, Høglend, & Havik, 2009). Similar to the literature on DSP burnout, level of experience of the therapist does not have consistent correlation one way or another with alliance (Horvath & Bedi, 2002).

While correlational studies of alliance are still lacking a bit, it is clear that working alliance itself is an important correlate of outcome in psychotherapy. Castonguay et al. (2006) recommend that alliance should be among the first and most important skills new trainees are taught. In particular, they recommend that therapist be trained to deal with client anger directed at the therapist. Bordin’s conceptualization will be used in the present study because of its unique emphasis on the interpersonal nature of alliance. Additionally, the working alliance inventory (Horvath & Greenberg, 1989) which is based on Bordin’s conceptualization of alliance, was created to be transtheoretical and therefore valid in a variety of treatment settings (Castonguay, Constantino, & Holtforth, 2006).
**Working alliance and intellectual disability.** Working alliance, as measured by items rated to be similar to the concept of working alliance, was predictive of better employment outcomes for a sample of 178 individuals with mild intellectual disability (Strauser et al., 2004). The major limitation of this study is the working alliance measure was developed from archival responses in another measure. This study only lends support to the idea that working alliance is important in this population.

Two qualitative studies examined perceptions of the therapeutic relationship for individuals with IDD, but from different perspectives. Roeden and Maaskant (2011) explored the relationship with DSPs from the perspective of 18 individuals with IDD, while Jones (2014) explored the counseling relationship from the perspective of 8 counseling psychologists. The themes that emerged from both studies seem to validate the importance of working alliance for this population. In both studies, the primacy of the relationship was evident. Roeden and Maaskant (2011) found that the four most common statements from individuals with IDD about their caregivers are similar to skills that correlate with working alliance mentioned above such as empathy, openness, and collaboration. The four are (1) The caregiver listens well and takes me seriously or asks questions (2) the caregiver makes time for me, (3) the caregiver is reliable, and (4) The caregiver lets me do things myself or solve them myself. Similarly, psychotherapist also identified the relationship as important above and beyond treatment type (Jones, 2014). Psychotherapist in this study also identified collaboration—a key component in alliance—as essential to the therapeutic process. In the present study, I continue this research by exploring the working alliance in ID services.

**Working Alliance in ID Services.** Researchers who have studied DSPs and burnout have called for better understandings of the therapeutic climate for individuals with IDD.
and for better intervention strategies for DSPs (Skirrow & Hatton, 2007). Both of these research gaps may be filled by an understanding of the way working alliance impacts DSP burnout. Thompson and Rose (2011) reviewed research on burnout and organizational climate in intellectual disability services. In their discussion on further research, they noted that one of the major gaps in the literature related to organizational variables is “social and/or therapeutic climate of services for people with intellectual disabilities and its relationship to staff burnout.” They go on to argue that this is an area of research that should not be ignored. Alliance, a hugely important construct in the field of psychotherapy, would give the field a robust construct for understanding the social and therapeutic climate for DSPs and its relationship to burnout. While there are research studies examining similar constructs such as attachment and positive interaction with individuals with IDD (Bigby, Knox, Beadle-Brown, & Clement, 2015; Hastings, 2010; Mitchell & Hastings, 2001; Roeden & Maaskant, 2011; Roeden et. al, 2012), there are currently no studies examining the alliance between DSPs and individuals with IDD.

Skirrow and Hatton (2007) in their review of the burnout literature for DSPs, noted that more research was needed that evaluated interventions designed to reduce burnout for DSPs. Alliance, although not an intervention program, is considered a common factor related to as much as 30% of the variance in therapy outcome. Working alliance is both a measure of relationship quality within therapeutic relationships, and a therapeutic intervention. In that way, it can be both descriptive and informative for DSPs. Mitchell and Hastings (2001) found that DSPs who engaged in disengagement behaviors in response to challenging behaviors were more likely to burnout. A focus on the working alliance in this common DSP situation might mitigate these disengagement behaviors and give the DSP tools to approach instead of withdraw. There is
also evidence that alliance—particularly the therapeutic bond component—has an impact on the provider in addition to the client. Linley and Joseph (2007) conducted a study on the well-being of 156 counselors related to the bond component of working alliance as well as burnout. Multiple regression analyses revealed the therapeutic bond was the best predictor of compassion satisfaction and positive psychological changes. Additionally, weaker bond was predictive of greater burnout. This study seeks to understand if working alliance can have a similar impact on DSPs. Similarly, Nota, Ferrari, & Soresi (2007) examined quality of life for DSPs working with individuals with IDD. The only variable related to quality of life for DSPs was confidence in the DSPs ability to form relationships with colleagues and supervisors. Although this variable did not uniquely account for variance in burnout scores, it underscores the impact that the relationship has on DSP functioning.

There is also evidence that the quality of relationship between DSPs and individuals with IDD affects DSP burnout. One of the few studies on DSPs that examined the connection between observed behavior and burnout scores noticed that the only observed behavior that correlated with burnout scores was positive client interaction (Lawson & O’Brian, 1994). Other observed behaviors, including negative interactions with a client, administrative tasks, and even custodial behavior with positive interaction were non-significant.

Working alliance may also be useful in understanding how challenging behaviors impact DSPs. Hastings and Remington (1994) reviewed research on attention given to individuals with intellectual disability. In general they found that DSPs do not give much attention to their clients. Interestingly, DSPs give more attention to individuals with challenging behaviors even after the challenging behavior has stopped. Hastings and Remington interpreted this as a significant maintainer of challenging behavior. In other words the kind and timing of attention given to
individuals is more important than the quantity. Mitchell and Hastings (2001) found that some DSPs disengage from their client as a way of coping with the stress of challenging behaviors and that this is a good predictor of emotional exhaustion and lack of personal accomplishment. This study provides further evidence that the type of engagement with individuals with IDD may be related to DSP burnout. Working alliance has the potential to add to this research because it is a measure of the quality of engagement.

Alliance has two methodological strengths that may make it useful in ID services in general and in this particular study. Effect size for alliance does not seem to be significantly influenced by monosource bias (Horvath & Bedi, 2002), which is a common limitation in research on burnout in DSPs (Skirrow & Hatton, 2007). In addition, common in research on DSPs is the use of cross-sectional data collection, which could result in a confound of assessment timing. Again, though, alliance effect size is not influenced significantly by timing of assessment (Horvath & Bedi, 2002). Given the paucity of research examining the effects of working alliance on DSP and consumer interactions, it is important to examine the potential utility of this important variable and construct within the IDD service population.

The moderation effect of working alliance. There is plenty of evidence that the working relationship correlates with burnout indicators for DSPs. In addition to exploring this main effect, how the working alliance moderates the impact of depression and work functioning on burnout was also examined. Work stress theorists and researchers in the ID field have identified work social support as a moderator of the impact of work stressors on burnout (Devereux et al., 2009; Gray-Stanley & Muramatsu, 2011; Payne & Fletcher, 1983). Because the relationship between DSP and individual with IDD is so central to the job role, it may be the case that this relationship also moderates the impact of demands on work stress. Indeed research from
other fields of study have confirmed the moderating effect of a positive relationship on known stressors and subjective experience of stress.

A study by Coan, Schaefer, & Davidson (2006), sought to understand how social contact would influence threat of physical pain. 16 married women were randomly assigned to three different groups. Each woman was subjected to the threat of electrical shock while holding the hand of their spouse, the hand of a stranger, or no hand at all. Functional magnetic resonance imaging (fMRI) was used to examine the activity in the pain centers of the brain. Compared to the control group, both the hand-holding groups demonstrated a lessening of activity in the pain centers. The researchers also examined the moderating effect of marital quality on this relationship and found that for wives who reported greater marital quality, the effect of the hand holding from their spouse was a stronger buffer against the threat of pain. This study demonstrates that quality of a relationship can impact the connection between a stressor and the experience of stress. This study is just one of a host of studies that has shown the way that social support can buffer the effects of stress (see for review, Cohen & Wills, 1985; DeVries, Glasper, & Detillion, 2003). There is evidence that social support intervenes in the stress process in a way that prevents the development of long-term consequences such as illness (Cohen & Wills, 1985). This line of research indicates that a strong working alliance may moderate the impact known stressors such as depression and poor work functioning on the long-term impact of work stress: burnout.

**Evaluation of the Research**

Research on DSPs has been plagued by a few methodological issues. Small sample sizes or very large and heterogeneous samples have caused results to be viewed with suspicion (Skirrow & Hatton, 2007). Researchers have also often chosen instruments that are have poor psychometric
properties (Skirow & Hatton, 2007; Thompson & Rose, 2011). Better instruments are needed to have results that are more valid. Additionally, the overwhelming majority of studies on the causes of burnout are correlational studies (Skirow & Hatton, 2007; Thompson & Rose, 2011). While correlational studies are useful in exploring relationships between variables, the field would benefit from methods that are more complex. In recent years there have been more studies employing moderation and mediation analysis that allow for a deeper understanding of how and in what way variables are related (see for examples, Gray-Stanley & Muramutsu, 2011; Mutkins et al., 2011). More studies like these are needed. Hastings and colleagues (2004) suggested that the field would benefit greatly from understanding how some staff cope better than others do. These types of research questions require more than bivariate correlational studies to answer. I sought to address many of the weaknesses by using a moderation analysis with a large sample and using instruments with strong psychometric properties.

Research has also been sparse with regard to the relationship between DSP and individual with IDD. Although research has demonstrated a correlation between a variety of relationship-related variables and burnout, no study has examined the moderating effect of the relationship on burnout. Additionally, many of the variables used to explore the effect of the relationship on burnout offer no clear intervention. For example, Rose et al. (2010) found that DSPs who reporting feeling under-benefitted in the relationship with the individual with IDD had higher burnout. They argue that these findings imply a need for more reciprocity in the relationship between DSP and individual with IDD, though it is unclear how to go about this. The advantage of bringing a concept like working alliance from the field of psychotherapy is that it is already an intervention. If a DSP is experiencing a lot of stress in their relationship with their client, they may be able to assess if they are aligned with him or her on tasks and goals. The DSP may also
evaluate the quality of their affective bond with the client. Results from the present study, then, may contribute to both the empirical burnout literature and the burnout intervention literature.

Working alliance has strong psychometric properties and a robust research base in psychotherapy research and may be uniquely relevant to DSPs as they care for individuals with IDD.
CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

Participants and Recruitment

This study used archival data that was collected in 2012 from a sample of direct support professionals (DSPs) in Central Pennsylvania. The use of this data for this study was approved by the Institution Review Board (IRB; see Appendix E). The participants were 201 adults who support individuals with intellectual and developmental disabilities from a variety of agencies who were attending a one-day training conference. Participants filled out a questionnaire packet that included a demographic questionnaire, the Treatment Outcome Package (TOP), the Working Alliance Inventory-Short form (WAI-SR), the Maslach Burnout Inventory (MBI-HS), and two other measures that are not relevant to the present study. Participants were also asked to fill out the measures while thinking about a client with challenging behaviors and whom they could recall clearly.

Similar to the population of DSPs, study participants were predominantly women (n=152; 75.6%) and had been working three or more years at their job (n=136; 67.7%) (see for examples Hatton et. al, 2001; Mutkins et. al, 2011; Thomas & Rose, 2010). 85.6% of the DSPs in this study had either a bachelor’s degree or a graduate degree (n=172). Just 3.5% had only a high school education with the remaining 10.4% attending some college. 80.5% of the participants had been working with the individual for six months or more (n=162). Participants filled a variety of roles including residential staff, manager or supervisor, nursing staff, peer support specialist, administrator, and other. A remarkable number of respondents chose the “other” category for their job role (46.8%), which may reflect a difference in occupational terminology that resulted in 155 different names being used for the same job in North Carolina (Test, Solow,
& Flowers, 1999). It may also reflect the variety of roles that DSPs often fill (Hewitt & Larson, 2007).

Measures

Criterion Variable: DSP Burnout

Maslach Burnout Inventory- Human Services Survey (MBI). Burnout was measured using the Maslach Burnout Inventory- Human Services Survey (Maslach & Jackson, 1986) (Appendix A). The MBI-HSS is a self-report measure created to be used with human service workers and healthcare workers. The MBI-HSS has three subscales: emotional exhaustion (EE), depersonalization (Dp), and personal accomplishment (PA). The EE subscale is made up of 9 items and includes items such as “I feel used up at the end of the workday.” The Dp scale is made up of 5 items and has items such as “I feel I treat some recipients as if they were impersonal objects.” The PA subscale contains 8 items such as “I feel I’m positively influencing other people’s lives through my work.” The total scale consists of 22 items and is measured on a 7 point likert scale from 0 (never) to 6 (every day). The MBI-HS is designed to measure the subscales of burnout (Maslach, Jackson, & Leiter, 1997).

Evaluating the subscales is a complex matter. There is no total score for burnout (Maslach et. al, 1996) and there is debate about what constitutes burnout based on the subscales (Dyrbye, West, & Shanafelt, 2009; Legassie, Zibrowski, & Goldszmidt, 2008; Schaufeli, Bakker, Hoogduin, Schaap, & Kladler, 2001; Thomas, 2004). Legassie et. al (2008) contended that significant scores were necessary on all three subscales to constitute burnout. Other researchers, including Maslach, disagree with this contention (Dyrbye et. al, 2009). Dyrbye et al (2009) list a few different ways that an individual in a sample would meet criteria for burnout as measured by the MBI. One method originally proposed by Rafferty, Lemkau, Purdy, & Rudisill (1986) is that
significant scores on either emotional exhaustion or depersonalization would indicate burnout. Schaufeli et al. (2001) also validated the primacy of these two subscales. In this study, the researchers found that emotional exhaustion and depersonalization distinguished a group of burned out workers from those who were not burned out. Another method for determining if a person is burned out is if the individual has significant scores for emotional exhaustion and at least one of depersonalization or personal accomplishment (Dyrbye et. al, 2009).

There are important considerations for the population in this study with regard to the MBI. Two research groups evaluated MBI using factor analytic techniques (Chao, McCallion, & Nickle, 2011; Hastings, 2004), and found that for the population of DSPs the 3-factor model was a reasonable fit. Chao et. al (2011) did find some evidence that depersonalization scale could be problematic for DSPs who are cultured not to think in depersonalized terms. Chao et al. (2011) argue that the depersonalization scale should be used with caution if the internal consistency scores are not high enough. In all these studies, though, emotional exhaustion is the subscale that is most indispensable to determining burnout. Because this study explored the impact of a new variable (working alliance) on the burnout indicators, all three subscales were measured for main effects. For the moderation analysis, only emotional exhaustion was used as a criterion variable in order to reduce the probability of a type I error. If any of the burnout subscales have poor internal consistency, though, they would have been excluded from the main effects model as well.

The MBI-HS has demonstrated good reliability. Reliability coefficients for a sample of 1,316 were .90 for emotional exhaustion, .79 for depersonalization, and .71 for personal accomplishment (Maslach, Jackson, & Leiter, 1997) The MBI-HS also has adequate internal consistency scores with the DSP population ranging from .68 for personal accomplishment to .87
for emotional exhaustion (Hastings, Horne, & Mitchell, 2004). In that same study, Hastings and colleagues (2004) also found that the MBI had good factor structure for the three subscales and concluded that this was the best model for the data.

Test retest reliability was also reported in a sample of graduate students and a sample of teachers (Maslach et. al, 1997). For the graduate students, the test was given again after a waiting period of 2 to 4 weeks. Reliability coefficients for graduate students were .82, .60, and .80 for emotional exhaustion, depersonalization, and personal accomplishment, respectively. For the sample of teachers, the re-test was given a year after the initial test with coefficients of .60, .54, and .57 for emotional exhaustion, depersonalization, and personal accomplishment respectively.

Studies have also revealed good convergent and divergent validity for the MBI-HS (Maslach et. al, 1997). MBI-HS scores converged with observer reports of the subjects as “emotionally drained” and “physically fatigued.” In particular, these individuals scored higher on the emotional exhaustion and depersonalization subscales. These individuals were also rated higher in terms of number of complaints about their clients. In another setting, spouses of police officers who scored higher on emotional exhaustion rated their partners as coming home with a variety of negative emotions. On the other hand, spouses rated their partners who scored higher on personal accomplishment as coming home with more emotions that are positive.

**Predictor Variables: Intrapersonal and Interpersonal Resources**

**Treatment Outcome Package (TOP).** Two subscales of psychological functioning were measured using the adult version of the treatment outcome package (Kraus, Seligman, & Jordan, 2005) (Appendix A). The TOP was designed to track outcome data for use in outpatient mental health settings. It is a relatively brief measure (58 items) considering the twelve subscales that
these items encompass. The subscales are normed on a population of over a million clients and
general population and thus provide good benchmarks for normal and abnormal functioning. The
TOP subscales used in this study are work functioning and depression. Both of these subscales
have good internal consistency and test-retest reliability (Kraus et al., 2005). Elevated scores on
TOP subscales indicates poor functioning. This is self-evident with the depression subscale (i.e.
higher depression indicates poorer functioning). The work functioning subscale, however, is not
a clear semantically. A higher score on work functioning indicates poorer work functioning.
When discussing work functioning in this study, the term “work functioning problems” was used
for clarity.

The depression subscale, which has items akin to clinical depression has 10 items such as
“felt little or no interest in most things.” The depression subscale has excellent convergent and
divergent validity. It has factor correlation with the Beck Depression Inventory (.92) and
diverges from Minnesota Multiphasic Personality Inventory measures of mania and
schizophrenia (-.23 and .24 respectively).

The work functioning subscale has 5 items. One item is related to work attendance and
the other four are related to various problems at work. Three of the items are interpersonal in
nature. The work functioning subscale correlated with BASIS32 daily role, and role functioning
emotional (-.51 and .40, respectively). It diverged from Psychasthenia (-.11).

**Moderating Variable: Working Alliance**

**Working Alliance Inventory-Short Form (WAI).** The Working Alliance Inventory-
Short form (Tracey & Kokotovic, 1989) (See Appendix A) is a measure of the quality of
relationship between client and therapist and can be administered to either one. The WAI-SR
was modified from the original Working Alliance Inventory (WAI; Horvath & Greenberg, 1989) by selecting the 4 most powerful items in each subscale of the original WAI. The three subscales are task agreement, goal agreement, and therapeutic bond. Each of the 12 items is measured on a 7 point likert scale with higher scores indicating higher alliance. The WAI-SR therapist version has been shown to have good psychometric properties—particularly internal consistency (Hanson, Curry, & Bandalos, 2002; Tracey & Kokotovic, 1989). The WAI-SR can be scored using the subscales or the total score. For this study only the total score will be used in order to maintain power in the moderation model.

Data Analysis Process

Rationale. Hierarchical regression was used to understand both the unique variance that each predictor variable has on the criterion variables as well as the interaction of working alliance on the relationship between depression and work functioning on the emotional exhaustion subscale of burnout. If results are consistent with the hypothesis, each of the predictor variables would show a main effect with one or more indicators of burnout. This would be consistent with the literature in the cases of work functioning, and depression. A main effect for working alliance would provide evidence that working alliance is an important construct for DSPs.

Hierarchical regression also allows for examination of a moderating effect for working alliance. If results were consistent with hypotheses, DSPs with high depression and high working alliance would have less emotional exhaustion than individuals with high depression and low working alliance. Similarly, DSPs with high work functioning problems and high working alliance will have lower emotional exhaustion than individuals with low work functioning
problems and low working alliance. Essentially, this study explored if working alliance could act as a buffer against other known correlates of emotional exhaustion.

**Demographic variables.** Demographic variables merit special attention with regard to burnout. Demographic variables, though often studied in conjunction with other variables, rarely have clear research support linking them to burnout (Schaufeli & Buunk, 2003). Schaufeli & Buunk (2003) note that some demographic variables can even be misleading. For example, some studies show a difference in burnout scores for men and women. These results are often confounded, however, by other work-related factors (e.g. pay scale; Schaufeli & Buunk, 2003). Depersonalization is a variable that does seem to be correlated with male sex (Schaufeli & Buunk, 2003). One study on DSPs confirms that men are more likely to score higher on depersonalization (Mutkins et. al, 2011). Another demographic variable that is potentially misleading is length of employment (Schaufeli & Buunk, 2003) because there is likely a healthy worker effect (see Karasek & Theorell, 1990) with burnout. In other words, individuals who remain on the job longer are there because they have were the healthy ones at the start. Because the data in the present study were cross-sectional data, the possibility that the sample would be biased in this way is greater. In their systematic review of the literature, Skirrow and Hatton (2007) also found job role to be a problematic demographic variable. One demographic variable included in this study that does correlate consistently with burnout is education level, with individuals with higher education having elevated scores on burnout indicators (Schaufeli & Buunk, 2003). As noted earlier, the education level of this sample was unusual for DSP studies and was largely homogenous, which may make it a less useful variable for understanding burnout.
As a result of the challenges related to demographic variables noted above, all the demographic variables were analyzed to determine if they need to be controlled in the regression analysis to follow. If any of them were correlated with any burnout indicators or any other predictor variables at a level great than .15, they were included in the analysis. The non-significant variables were dropped from the study, which also increased the power of the study.

Pre-Analysis

**Missing data.** The first step before univariate analysis could begin was to deal with any missing values in the data. As each case was entered, 6 participants were eliminated from the analysis because they failed to complete whole measures (e.g. they did not answer any of the questions on the TOP).

Sterner (2011) recommends diagnosing the type of missing data present. For this step, statistical software (SPSS) was employed to analyze the missing data to see if there is a statistical difference between the data that has responses that involve missing data and those that do not. This process is called missing value analysis: expectation maximization. If the chi-square comes out non-significant, then the missing values are considered missing completely at random (MCAR). If the data are not MCAR, further analysis would have been necessary. If missing data were MCAR, missing data could either be deleted (in the case of a large enough sample and a small enough percentage of missing data) or imputed using mean substitution or regression imputation (Sterner, 2011). In this data set, the missing data were found to be MCAR. Because the sample size is sufficiently large and missing data are random, mean substitution was used (Tabachnick & Fidell, 2007).
Sample size analysis. Once the sample size is known for analysis purposes, Tabachnick and Fidell (2007) recommend using the formula 104 + m for determining if the sample size is large enough for the number of predictor variables—especially when the analysis is interested in individual predictors as in the present study. In the formula above “m” equals the number of predictor variables. This number helped determine what variables could be analyzed in this study and would vary depending on the correlation analysis of the demographic variables (as noted above). The sample size of 194 was sufficiently large based on the above formula.

Outliers. Regression analysis can be sensitive to outliers, especially if the sample size is small (Tabachnick & Fidell, 2007). In this study, outliers were examined using standardized scores, as recommended by Tabachnick & Fidell (2007). Any standardized score greater than the absolute value of 3.29 was considered skewed. Three scales had one outlier (MBI Personal Accomplishment, TOP Depression, and TOP Work Functioning) and one scale had two (MBI Depersonalization). Each of these cases was examined, the participants had average scores on the other subscales, and there was no evidence that participants answered the questions randomly or uniformly. These participants’ data were therefore retained without any changes (Pedhauzer, 1997).

Univariate Analysis

The first step in data analysis for hierarchical regression was to ensure that the data meet the three assumptions of regression analysis: normality, linearity, and homoscedasticity.

Normality. Normality refers to the distribution of the responses for each predictor variable along a normal curve. Tabachnick and Fidell (2007) recommend examining the shape of the distributions for skewness or kurtosis for large sample sizes such as the sample in this study.
If the distribution was visually skewed, nonlinear transformations were considered to make the variables fit more closely to a linear model. A formula for determining skewness was also employed to determine if the normality assumption is supported by the data. If the skewness statistic divided by the standard error of skewness resulted in a value less than the absolute value of 2, then the distribution met the assumption of normality. If the equation yielded a value greater than the absolute value of 2, then non-linear transformations were employed. Similarly, if the kurtosis statistic divided by the standard error of kurtosis was less than the absolute value of 4, the normality assumption was further supported.

**Linearity.** The linearity assumption is that there is a straight-line relationship between two variables. Examining the bivariate scatterplot should yield an oval shape that fits to a straight line indicating a normal and linear relationship between the variables. Residual plots were also examined to determine if any transformations helped the data to conform to the linearity assumption.

**Homoscedasticity.** The homoscedasticity assumption refers to the error variance for all values of criterion variable. In order for the data to support homoscedasticity, the error variance for each value of criterion variable must be constant (Pedhauzer, 1997). If the variables do not meet this assumption, they are non-normal, collinear, or result from measurement error. Bivariate scatterplots were used to diagnose homoscedasticity (Tabachnick & Fidell, 2007). If the data supported these assumptions, the scatterplot would have no discernable pattern. If these assumptions were not supported, the data would need to be explored and potentially corrected.

**Bivariate Analysis**
Bivariate analysis was used to determine the strength and direction of the correlation between variables. Pearson’s correlation was used to determine if the correlations were large (greater than the absolute value of .50), moderate (.30-.49), or small (.10-.29; Cohen, 1988).

**Multivariate Analysis**

The next step was to conduct the multivariate hierarchical regression. This process examined the variability in the criterion variable as different predictor variables were added. There are three subscales of the MBI-HS that are the three criterion variables. Demographic variables were controlled in block one of each model. The three predictor variables (depression, work functioning problems, and working alliance) were added in one at a time as discussed below. Two interactions were examined for emotional exhaustion. One product of working alliance and depression and one product of working alliance and work functioning were created for this purpose.

**Regression Models**

Four regression models were designed to answer the research questions of this study: the relationship between three criterion variables of burnout, and three predictor variables (TOP depression, TOP work functioning, and working alliance). These regression models were also designed to examine the impact on emotional exhaustion of the interaction between working alliance and depression and working alliance and work functioning problems, respectively. If either of those products has a direct effect on emotional exhaustion, a moderation effect is said to exist (Baron & Kenny, 1986).

**Model 1.** Model 1 was used to answer Research Question 1: *To what extent do depression, work functioning problems, working alliance, and interaction of depression and
working alliance influence emotional exhaustion while controlling for demographic variables? Criterion variable emotional exhaustion was predicted by predictor variables in the following order: educational level (Block 1), depression (Block 2), work functioning problems (Block 3), working alliance (Block 4), and working alliance x depression (Block 5). Each variable was entered in alone so that the unique variance of working alliance on emotional exhaustion could be understood. It was important to understand if working alliance influenced emotional exhaustion beyond the other variables, which already have research support.

**Model 2.** Hierarchical Regression Model 2 was used to answer Research Question 2: To what extent do depression, work functioning problems, working alliance, and interaction of work functioning problems and working alliance influence emotional exhaustion while controlling for demographic variables? Dependent variable emotional exhaustion was predicted by predictor variables in the following order: educational level (Block 1), depression (Block 2), work functioning problems (Block 3) working alliance (Block 4), and working alliance x work functioning problems (Block 5).

**Model 3.** Hierarchical Regression Model 3 was used to answer Research Question 3: To what extent do depression, work functioning problems, and working alliance influence depersonalization while controlling for demographic variables. Criterion variable depersonalization was predicted by predictor variables in the following order: educational level (Block 1), depression (Block 2), work functioning problems (Block 3), and working alliance (Block 4).

**Model 4.** Hierarchical Regression Model 4 was used to answer Research Question 4: To what extent do depression, work functioning problems, and working alliance influence personal
accomplishment while controlling for demographic variables. Criterion variable personal accomplishment was predicted by predictor variables in the following order: educational level (Block 1), depression (Block 2), work functioning problems (Block 3), and working alliance (Block 3).
Chapter 4

Results

This chapter covers the findings of the study, which include descriptive statistics, bivariate analysis, and hierarchical multiple regression. No interaction effects were found in this study.

Univariate Analysis

**Descriptive Statistics.** Descriptive statistics of the main variables in this study are presented in Table 4.1. The mean and standard deviations for *emotional exhaustion* (M=19.88, SD=10.50), *personal accomplishment* (M=38.01, SD=6.80), and *depersonalization* (M=3.69, SD=4.21) were consistent with previous studies involving DSPs (Chao, McCallion, & Nickle, 2011; Lawson & O’Brien, 1996; Mitchell & Hastings, 2001). Reliability scores for each of the scales were adequate ranging from .899 for *emotional exhaustion* to .739 for *depersonalization*. The Working Alliance Inventory-Short Form has not been used previously for this population, though the mean (4.74) and standard deviation (.86) were similar to those cited in other studies (Munder, Wilmers, Leonhart, Linster, & Barth, 2010; Nissen-Lie, Havik, Hoglend, Monsen, & Ronnestad, 2013). The TOP subscales had means that were lower than the clinical samples from previous studies, which was to be expected, since this is not a clinical sample (Kraus & Castonguay, 2010). TOP scale scoring is a proprietary system and therefore could not be subjected to reliability testing. The TOP has, however, been tested on thousands of individuals, including non-clinical samples. For the subscales included in this study, other studies have shown the reliability of .90 and .93 for *work functioning* and *depression*, respectively (Kraus & Castonguay, 2010).
Normality. Skewness and kurtosis were examined to determine if variables were normally distributed. Each of the variables of interest in this study had skewness ratio greater than the absolute value of 2.1, indicating that they were skewed either positively (emotional exhaustion, depersonalization, depression, work functioning) or negatively (working alliance, personal accomplishment). Additionally, the kurtosis ratio was greater than the absolute value of 4 for depersonalization and depression. Examination of the histograms confirmed the above statistics. Variables that appear positively skewed are emotional exhaustion, depersonalization, depression, and work functioning. Personal accomplishment and working alliance appeared to be negatively skewed. In addition to being positively skewed, depersonalization also appeared to be truncated. To address the above problems, transformations of each variable were employed.

Linearity. Residual plots and bivariate scatterplots were examined to test the linearity assumption and no curvilinear relationships were found. This means that the assumption of linearity is supported, allowing for pearson’s correlation and multiple hierarchical regression analysis to continue. Bivariate plots of the standardized residuals versus predicted values show only slight asymmetry, suggesting that the linearity assumption is largely supported by the data.

Table 4.1
Descriptive Statistics of Main Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Sta. Error of Skewness</th>
<th>Kurtosis s</th>
<th>Sta. Error of Kurtosis s</th>
<th>Skewness Ratio after Trans</th>
<th>Kurtosis Ratio after Trans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Exhaustion</td>
<td>19.88</td>
<td>10.5</td>
<td>.67</td>
<td>.175</td>
<td>.151</td>
<td>.347</td>
<td>-1.54</td>
<td>1.76</td>
</tr>
<tr>
<td>Depersonalization</td>
<td>3.69</td>
<td>4.21</td>
<td>1.44</td>
<td>.175</td>
<td>1.84</td>
<td>.347</td>
<td>1.89</td>
<td>-2.96</td>
</tr>
<tr>
<td>Personal Accomplish</td>
<td>38.02</td>
<td>6.81</td>
<td>-.99</td>
<td>.175</td>
<td>1.25</td>
<td>.347</td>
<td>-.13</td>
<td>-1.89</td>
</tr>
<tr>
<td>Depression</td>
<td>.38</td>
<td>1.15</td>
<td>1.43</td>
<td>.175</td>
<td>2.01</td>
<td>.347</td>
<td>1.87</td>
<td>-.63</td>
</tr>
<tr>
<td>Work Functioning</td>
<td>.12</td>
<td>.92</td>
<td>.947</td>
<td>.175</td>
<td>1.22</td>
<td>.347</td>
<td>-.26</td>
<td>-2.01</td>
</tr>
<tr>
<td>Working Alliance</td>
<td>4.74</td>
<td>.86</td>
<td>-.40</td>
<td>.175</td>
<td>.195</td>
<td>.347</td>
<td>.81</td>
<td>-.15</td>
</tr>
</tbody>
</table>

N=190
**Homoscedasticity.** Bivariate correlation matrix and bivariate scatterplots were examined for homoscedasticity. No correlations among the variables was greater than the absolute value of .9 (see Table 4.2), meaning that there was no multicollinearity among the predictor variables or between the predictor variables and the criterion variables (Tabachnick & Fidell, 2007). Bivariate scatterplots of the standardized residuals versus predicted values showed random distribution for emotional exhaustion, which supported the homoscedasticity of this variable. The same scatterplots for personal accomplishment and depersonalization showed a slight pattern in the data, even after transformations were attempted. In other words they were not perfectly random, but largely random.

**Data transformations.** Data transformations were attempted to address issues of normality, linearity, and homoscedasticity identified for each variable in the study. Working alliance and personal accomplishment were transformed using power transformations because they were negatively skewed. The other variables were transformed using a Log 10 transformation because of their positive skew. For all the variables except for emotional exhaustion, these transformations brought the skewness and kurtosis ratios back within acceptable limits (see Table 4.1). Emotional exhaustion was then subjected to a square root transformation, which brought the skewness and kurtosis ratios back to acceptable levels. The resulting histograms showed improved normality for most of the variables, though not for depersonalization. This is probably a result of the truncated data; most of the data are grouped at the bottom of the distribution. Residual analysis of the expected versus observed residuals provided evidence that these transformations resulted in a normal distribution. The researcher decided to keep these transformed values because of the improvement in the normality of the data, despite the remaining concerns about linearity and homoscedasticity. These transformations make the data more suitable for Pearson’s correlation and multivariate statistics.

**Bivariate Analysis**

Bivariate analysis was used to understand the strength and direction of the correlation between pairs of variables. Pearson’s correlation matrix was used to examine the relationship between each pair or
variables in the study. Results are presented in Table 4.2 excluding certain demographic variables as discussed below.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Education Level</td>
<td>-</td>
<td>-.003</td>
<td>.149**</td>
<td>.137</td>
<td>-.187*</td>
<td>.010</td>
<td>-.268**</td>
</tr>
<tr>
<td>2 Emotional Exhaustion</td>
<td>-</td>
<td>-.312**</td>
<td>-</td>
<td>-</td>
<td>.252**</td>
<td>.375**</td>
<td>-.337**</td>
</tr>
<tr>
<td>3 Depersonalization</td>
<td>-</td>
<td>-.224**</td>
<td>-.163*</td>
<td>.268**</td>
<td>-</td>
<td>-1.72*</td>
<td>-</td>
</tr>
<tr>
<td>4 Personal Accomplishment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Depression</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Work Functioning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Working Alliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* p<.05, ** p<.01

Results of the correlation analysis showed that the three criterion variables were correlated with one another (r=.538, .326, -.312, all p < .0001) with medium to large correlations (Cohen, 1988). This is consistent with previous research on the subscales of emotional exhaustion (Maslach et. al, 1996). The only demographic variable that correlated with any of the main variables in this study was Highest Education You Attained. Highest Education had small correlations with working alliance (-.268, p=.0001), depression (-.187, p=.010), and depersonalization (.149, p=.041). Working alliance had a small correlation with emotional exhaustion (-.226, p=.002), a small correlation with personal accomplishment (.268, p=.0001) and a medium correlation with depersonalization (-.337, p=.0001). Working alliance also had a small correlation with work functioning (-.172, p=.018). Depression had a high correlation with emotional exhaustion (.514, p<.01), a medium correlation with work functioning (.344, p=.0001) and had a small correlation with depersonalization (.252, p=.0001). Work functioning had a high correlation with emotional exhaustion (.510, p=.0001) and a medium correlation with depersonalization (.375, p=.0001). Because highest education was the only demographic variable that correlated with any variable at a value greater than .15, highest education was the only demographic variable included for further analysis. Because regression analysis is based on Pearson’s correlation, it is fair to exclude variables that do not have a correlation of at least .15 with any other variable in the study.
Hierarchical Multiple Regression

Multivariate analysis was the main analysis of this study to answer the research questions. Before regression analysis, assumptions of normality, linearity, and homoscedasticity of the variables were tested. After transforming each variable, each of the assumptions was met except for homoscedasticity for depersonalization and personal accomplishment. Linear Regression was chosen with this limitation in mind because these two scales were truncated. In other words, it did not make sense to try another form of regression (e.g. quadratic). Additionally, a product term was created for working alliance times depression and working alliance time work functioning to test the interaction effect between these pairs of variables. No interaction effects were found in this study.

Regression Model 1

Regression model 1. Regression Model 1 was used to answer Research Question 1: To what extent do depression, work functioning, working alliance, and interaction of depression and working alliance influence emotional exhaustion while controlling for demographic variables? Criterion variable emotional exhaustion was predicted by predictor variables in the following order: educational level (Block 1), depression (Block 2), work functioning (Block 3), working alliance (Block 4), and working alliance x depression (Block 5). See Table 4-3 for unstandardized and standardized coefficients of the predictors, total R-square, and F value for change in R-square.

The demographic variable education level was entered first because it had above a .15 correlation with both working alliance and depression. This block was the control block. Each of the predictor variables were added individually to understand which type of resource explained the most variance in emotional exhaustion. Depression was added first because research has already demonstrated a strong link between depression and emotional exhaustion. Work
functioning was added second because previous studies have found a link between various kinds of interpersonal work related resources and emotional exhaustion. Finally, working alliance was added last to see if it uniquely accounted for variance in emotional exhaustion scores because there has not been any research on working alliance for this population.

Results of the regression analysis showed that *depression* and *work functioning* significantly predicted emotional exhaustion. *Depression* alone accounted for 27.8% of the variance with a large effect size (Cohen’s $f^2 = .38$). *Work functioning* accounted for 11.2% of the variance with a medium effect size (Cohen’s $f^2 = .19$). Together *depression* and *work functioning* accounted for 39.1% of the variance in emotional exhaustion scores. *Working alliance* and *education level* were not significant predictors of emotional exhaustion. The interaction was non-significant (Sig F Change=.523.) The adjusted $R^2$ values mirror the $R^2$ values, indicating that the regression results are reliable.

Depression positively predicted emotional exhaustion ($β = .396, t= 6.376, p=.0001$), which indicates that DSPs who have higher levels of depression are more likely to also experience elevated emotional exhaustion at work. Work functioning positively predicted emotional exhaustion ($β = .362, t= 5.92, p=.0001$), indicating that DSPs who have poorer relationship at work are more likely to experience elevated emotional exhaustion.

Residual analysis indicated that the assumptions of normality, linearity, and homoscedasticity were partially supported. The histogram showed a normal curve with some peaks in the middle of the distribution. Scatterplots of the residuals and each of the predictors showed that the loess line followed the 0-line quite closely, meaning that the relationship between emotional exhaustion and depression, work functioning, and working alliance were all
linear. Scatterplots also showed residuals scattered randomly around zero, thus supporting homoscedasticity. These assumptions being largely supported means that the choice of a linear regression model is appropriate and the findings can be trusted.

**Regression Model 2**

Hierarchical Regression Model 2 was used to answer Research Question 2: *To what extent do depression, work functioning, working alliance, and interaction of work functioning and working alliance influence emotional exhaustion while controlling for demographic variables?* Criterion variable *emotional exhaustion* was predicted by predictor variables in the following order: educational level (Block 1), depression (Block 2), work functioning (Block 3) working alliance (Block 4), and working alliance x work functioning (Block 5). The interaction was non-significant (Sig F Change=.680.) The rest of the data from this model is the same as Model 1.

**Regression Model 3**

Hierarchical Regression Model 3 was used to answer Research Question 3: *To what extent do depression, work functioning, and working alliance influence depersonalization while controlling for demographic variables?* Criterion variable *depersonalization* was predicted by predictor variables in the following order: educational level (Block 1), depression (Block 2),
work functioning (Block 3), and working alliance (Block 4). See Table 4-4 for unstandardized and standardized coefficients of the predictors, total R-square, and F value for change in R-square.

Results showed that all of education level, depression, work functioning problems, and working alliance were significant predictors of depersonalization. Together they accounted for 24.2% of the variance with a medium to large effect size of .282. The small difference between the total R-square and the adjusted R-square shows that the regression results are reliable.

Education level positively predicted depersonalization (β=.03, t= 2.33, p=.021), indicating that DSPs who have completed higher levels of education are more likely to depersonalize their clients. Depression also positively predicted depersonalization (β=.290, t= 4.17, p=.0001, F^2=.091), indicating that DSPs with higher levels of depression were also more likely to depersonalize their clients. Work functioning also positively predicted depersonalization (β=.307, t= 4.343, p=.0001, F^2=.099), suggesting a positive relationship between poorer work functioning and DSP depersonalizing behavior. Working alliance negatively predicted depersonalization (β=-.245, t=-3.619, p=.0001, F^2=.070) indicating a negative relationship between DSPs who had a better working alliance with their clients and their depersonalizing behavior.

Residual analysis indicated that the assumptions of normality and linearity were partially supported. The histogram showed a normal curve with one peak in the middle of the distribution just inside -1 standard deviation. Scatterplots of the residuals and each of the predictors showed that the loess line followed the 0-line quite closely, meaning that the relationship between depersonalization and depression, work functioning, and working alliance were all linear.
Scatterplots showed residuals scattered in a slight diagonal pattern around zero, thus not supporting homoscedasticity. These slight departures from the basic assumptions of linear regression suggest that the results should interpreted with some caution, especially for beta values on the lower end of significance.

Regression Model 4

Hierarchical Regression Model 4 was used to answer Research Question 4: To what extent do depression, work functioning, and working alliance influence personal accomplishment while controlling for demographic variables. Criterion variable personal accomplishment was predicted by predictor variables in the following order: educational level (Block 1), depression (Block 2), work functioning (Block 3), and working alliance (Block 3). See Table 4-5 for unstandardized and standardized coefficients of the predictors, total R-square, and F value for change in R-square.

Results showed that only working alliance was a significant predictor of personal accomplishment accounting for 8.3% of the variance and a small effect size of $F^2 = .097$.

Working alliance positively predicted personal accomplishment ($\beta = .306$, $t= 4.263$, $p=.0001$) indicating that DSPs who have a better working alliance with clients are more likely to
experience higher levels of personal accomplishment. The small difference between the total R-square and the adjusted R-square shows that the regression results are reliable.

Depression was a significantly negative predictor of personal accomplishment when working alliance was not entered into the model ($\beta = -0.207$, $t = -2.897$, $p = .004$, $F^2 = .044$). This finding suggests that higher reported depression has a negative relationship to reported feelings of personal accomplishment. There was no significant effect for depression once working alliance was added to the equation, because of the shared variance between depression and working alliance on personal accomplishment. Education level was not a significant predictor until working alliance was added to the equation, indicating that working alliance suppressed the error for education level.

Residual analysis indicated that the assumptions of normality and linearity were partially supported. The histogram showed a normal curve with a few peaks in the distribution. Scatterplots of the residuals and each of the predictors showed that the loess line followed the 0-line quite closely, meaning that the relationship between personal accomplishment and depression, work functioning, and working alliance were all linear. Scatterplots showed residuals scattered in a very slight diagonal pattern around zero, thus not supporting homoscedasticity. These slight departures from the basic assumptions of linear regression suggest that the results should interpreted with some caution, especially for beta values on the lower end of significance.
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*p< .05, **p<.01, ***p<.001
Chapter 5

DISCUSSION

The main purpose of this study was to examine how burnout indicators for DSPs are impacted by the presence of certain intrapersonal and interpersonal resources. Based on the job demands-resource model of work stress (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), it was hypothesized that depression, work functioning problems, and working alliance would all impact burnout for DSPs uniquely. It was also hypothesized that working alliance would interact with depression and work functioning problems to moderate their impact on emotional exhaustion. Regression analysis results showed that depression, working alliance, and work functioning problems each have significant and unique impact on burnout, though they impacted different indicators within the burnout model.

Results also showed that there was no interaction effect for working alliance. It is possible that no interaction effect was detected because working alliance is not a moderator of emotional exhaustion. It is also possible that this result was due to methodological limitations. Researchers have noted that moderation effects are challenging to detect because of certain methodological problems (Murphy & Russell, 2016). Murphy and Russell (2016) note that low reliability of multiplicative terms, use of transformations, and low power can all impact ability to detect a moderation effect. All of these issues could have affected this study. Future researchers looking at working alliance as a moderator should seek to mitigate these limitations. Discussion of the findings, implications for practice, limitations of the study, and recommendations for future research are presented in this chapter.

Discussion of Findings

Direct support professionals (DSPs) have a critical role in the lives and well-being of individuals with intellectual and developmental disabilities (IDD). Research has demonstrated that for individuals with IDD who live in group homes, DSPs are more important to in their social network than even their families and friends (Asselt-Goverts et al., 2013; Widmer et al., 2008). DSPs have also been described as “linchpin” of services for individuals with IDD. Researchers in the last 20 years have explored high rates
of burnout in DSPs and have found that certain intrapersonal and work-related interpersonal factors predict burnout.

Education level in this study was a control variable, which was not a part of any of the hypotheses. In the regression analysis, though, education level was a significant predictor of depersonalization. DSPs with higher education levels were more likely to score high on depersonalization. This finding is consistent with prior research (Maslach et. al, 1996), though it runs counter to the job demands-resources model. A higher level of education would seem to be a resource that would decrease the likelihood of higher levels of depersonalization and yet it is consistently found to correlate with higher depersonalization. I conducted a post-hoc analysis using a one-way analysis of variance to see if there was a significant difference between the means scores for the four levels of education level. Because a small number of participants had not graduated college, the two lower groups were combined (i.e. high school graduate and some college). The ANOVA revealed a difference between the groups and a post-hoc Welch test revealed that there was a significant difference between those who had not graduated college yet (whether they were high school graduates or had attended some college) and each of the more highly educated groups (college graduates and graduate school graduates).

One explanation for these results may be related to the theory of burnout described in the literature review above. Pines (1993) differentiated normal job stress from burnout based on the idealism of the worker. In other words, workers with higher expectations of the job may experience more burnout. Perhaps DSPs who have higher levels of education expect more from themselves and their clients. When improvements come slowly or not at all, DSPs with higher levels of education might then be more likely to depersonalize in order to cope. Another possibility is related to a limitation of this study. The demographic survey was designed to determine level of education but not type of education. It is possible that those at higher levels of education were trained in an unrelated field. This would create a mismatch between worker and work, which researchers have identified as a correlate of work stress (see for review, Devereux et. al, 2009).
Depression in this study was hypothesized to explain how intrapersonal resources could affect burnout indicators where depression would have a positive correlation with both emotional exhaustion and depersonalization and a negative correlation with personal accomplishment. In other words, DSPs with higher levels of depression would not have the psychological resources necessary to deal with the stress of the job, leading to emotional exhaustion and depersonalization of the client. Results indicated that depression was a significant predictor of all three subscales of the MBI. This finding is supported by the job demands-resources theory where depression is understood as a lack of psychological resources, which would lead to more burnout. Depression has been shown to have a positive correlation with burnout for DSPs in prior research (Aiken & Schloss, 1994; Mutkins, Brown, & Thorsteinsson, 2011). In particular, Aiken & Schloss (1994) and Mutkins, Brown, & Thorsteinsson (2011) found depression to be significantly correlated with emotional exhaustion and depersonalization. In both studies, personal accomplishment was not related to depression as it was in this study.

Work functioning in this study was hypothesized to explain how work-related interpersonal resources could affect burnout indicators. Work functioning is a largely interpersonal construct related to relationships at work. In the current study, it was hypothesized that work functioning would affect all three indicators of burnout, which is in line with the meta-analysis from a variety of professions (Lee & Ashforth, 1996). In other words, DSPs who have more supportive relationships with co-workers and supervisors have more resources to deal with emotional exhaustion and depersonalization, while boosting their sense of personal accomplishment. Results indicated that work functioning problems was a significant predictor of emotional exhaustion and depersonalization, but not personal accomplishment. These results are supported by previous research, though there are some differences between studies (Gil-Monte & Piero, 1998; Lee & Ashforth, 1996; Mutkins, Brown, & Thorsteinsson, 2011; Shaddock et. Al, 1998). Lee and Ashforth conducted a meta-analysis finding that support from co-workers and supervisors were related to all three burnout indicators. In regression analysis with the population of interest, Mutkins et al. (2011) found that social support was significantly related only to personal accomplishment. It is
interesting that Mutkins et. al (2011) found social support to be related to personal accomplishment, but the present study did not have similar findings for work social support. It is possible that support at work and support outside of work interact differently with personal accomplishment. The findings in this study seem to suggest that while social support of any kind is correlated with lower emotional exhaustion and depersonalization, only support at work is related to an increased sense of personal accomplishment. Perhaps support from work colleagues is more important for personal accomplishment because only work colleagues really know the experience of being a DSP.

The relation between DSP and individual with IDD has often been overlooked in previous research. Working alliance in this study was hypothesized to explain how DPS-client interpersonal resources affects burnout indicators. In other words, DSPs who have a better working relationship with their client will have lower emotional exhaustion, depersonalization, and higher personal accomplishment. Results indicated that working alliance was a significant predictor of depersonalization and personal accomplishment. The relation between working alliance and depersonalization is unique. There has been little research on the impact of this DSP-individual with IDD relationship on burnout and almost no research on working alliance with this population. In none of those studies, though, was the interpersonal variable a significant predictor of depersonalization. Lawson and O’Brien (1994) observed behaviors of DSPs with their clients and found that only positive client interaction (among 11 other work-related behaviors) was correlated with any of the subscales of the MBI (emotional exhaustion, -.38, p > .01). Rose et. Al (2013) found that patient cohesion was related to emotional exhaustion and that patient cohesion and therapeutic hold were related to personal accomplishment. These constructs, which are similar to working alliance, influenced the hypotheses in this study, but these results indicate working alliance is related to burnout in a unique way. The results of the hierarchical regression analysis are discussed in the following paragraphs.
Predicting Emotional Exhaustion

Emotional exhaustion was predicted by depression and work-functioning problems. Together they accounted for 39% of the variance in emotional exhaustion scores. Most of that variance was due to depression, which accounted for 27.8% of the variance in emotional exhaustion scores. Working alliance accounted for only 1.2% of the variance beyond depression and work functioning. This result was non-significant, though it was close enough (p = .051) to merit further research on a link between working alliance and emotional exhaustion. Because the significance level was so close, a post-hoc analysis was run in which working alliance was entered into before depression and work functioning problems. When entered in this order, working alliance accounted for 6% of the variance and was significant at p = .01. This result suggests that further research on a connection between working alliance and emotional exhaustion is merited. Education level was a non-significant predictor of emotional exhaustion.

The findings for depression in this study are consistent with previous studies. Mutkins et. al (2011) also conducted a regression with depression predicting emotional exhaustion. In that study, however, depression was not entered into the regression by itself. The model that included depression and other variables accounted for 42% of the variance in emotional exhaustion scores. The results of this study provide some additional context to the model previously identified by Mutkins and colleagues. Scaufeli and Enzmann (1998) examined 12 studies that included a measure of depression and the MBI. They found that on average, depression and emotional exhaustion shared 26% variance. The present study further supports that level of shared variance.

The findings for work functioning problems in this study are consistent with prior research. Work functioning problems in this study accounted for 11.2% of the variance in emotional exhaustion scores. Researchers have found that supervisor support accounts for 14% of the variance in emotional exhaustion scores (Lee and Ashforth, 1996). Lee and Ashforth (1996) also found that co-worker support accounted for an average of 5% of the variance in emotional exhaustion scores. The work functioning subscale does
not distinguish between supervisor and co-worker support, which may explain why the variance explained is between the two numbers found in previous research.

**Support of theory.** These results support the job demands-resources theory of burnout. Intrapersonal and interpersonal work-related resources correlated with emotional exhaustion in theoretically anticipated ways. Working alliance, however, was a non-significant predictor when entered into the analysis last. Working alliance was a significant predictor at post-hoc when added into the analysis first. These results indicate that intrapersonal and work-related interpersonal resources both contribute to predicting emotional exhaustion in unique ways and are better predictors of emotional exhaustion than working alliance.

**Predicting Depersonalization**

Depersonalization in this study was predicted by all of the predictor variables: depression, work functioning, working alliance, and education level. Together they accounted for 24.2% of the variance in depersonalization scores. Education level accounts for 2.3% of the variability in depersonalization scores with an F ratio of 5.44. Based on the $R^2$ change, one might conclude that depression is the best predictor of depersonalization at 8.1% of the variance predicted. Work functioning was entered into the regression after depression and accounted for 8.0% of the variance. The F ratio for work functioning ($F_{ch}= 18.86$) is higher than depression ($F_{ch}= 17.392$), indicating that work functioning may be the best predictor of depersonalization. Working alliance was also strong predictor of depersonalization accounting for 5.3% of the variance with an F ratio of 13.09.

The findings for predictive value of depression on depersonalization are consistent with prior research. Schaufeli and Enzmann (1998) found that depression and depersonalization shared 13% variance, on average. In the Mutkins et. al (2011) study, depression was a significant predictor of depersonalization. Unlike the present study, depression was not entered into the model individually so there was no way to tell how much of the variability it predicted.
The findings for work functioning problems in this study are consistent with prior research. Work functioning problems in this study accounted for 8.0% of the variance in depersonalization scores. Researchers have found that supervisor support accounts for 6% of the variance in depersonalization scores (Lee and Ashforth, 1996). Lee and Ashforth (1996) also found that co-worker support accounted for an average of 5% of the variance in depersonalization scores.

The finding for the predictive value of working alliance on depersonalization is unique to this study. As was noted above, previous research has only found links between client-relationship variables and emotional exhaustion (Lawson & O’Brien, 1994; Rose et. al, 2013) and personal accomplishment (Rose et. al, 2013). Theoretically, it makes sense for a better working relationship to be related to less depersonalization, which makes it surprising that previous research found no correlation.

Support of theory. These results support the job demands-resources theory because all of the resources studied were significant predictors of depersonalization. Contrary to the theory is the finding about education level, assuming higher education is a resource in this instance. More research is needed to understand this education phenomenon. Perhaps more highly educated individuals expect more of themselves and are therefore more likely to become emotionally reactive to lack of progress. Perhaps we need better instruments to understand what kinds of education are correlated with higher depersonalization and what kinds of education are correlated with lower levels of depersonalization. The findings for working alliance in this study provide support for working alliance as a valuable construct with this population. It also lends more support to the notion that the quality of the relationship between DSP and client is an important factor in whether DSPs depersonalize their client. The implications of this finding are explored further in the next section of this chapter.

Predicting Personal Accomplishment

Personal accomplishment was predicted by depression and working alliance in this study. Education level and work functioning were non-significant predictors of personal accomplishment. The
The strongest predictor of personal accomplishment is working alliance, which accounted for 8.2% of the variability with an F ratio of 18.17. Depression accounted for 4.2% of the variance in personal accomplishment with an F ratio of 8.39.

The finding of the predictive value of working alliance on personal accomplishment is unique to this study. No previous research exists comparing working alliance to personal accomplishment for this population. One study examined the bond component of working alliance and found it was related to burnout for psychotherapists (Linley & Joseph, 2007). That study did not use the MBI to measure burnout and did not have a total score for working alliance. Rose et. al (2013) found a correlation between patient cohesion and personal accomplishment. They also found a correlation between therapeutic hold and personal accomplishment. A path analysis was conducted examining only emotional exhaustion, thus leaving the question of whether these relationship variables uniquely predict personal accomplishment unanswered. The present study provides evidence that working alliance does uniquely predict personal accomplishment. More than that, working alliance was the best predictor of personal accomplishment in this study.

Support of theory. The results from this regression support the job demands-resources theory because two of the resources affected personal accomplishment in the expected directions. The results here for depression are in line with prior research (Lee & Ashforth, 1998), but the results for working alliance are worth noting. The fact that work functioning, another interpersonal resource, is non-significant in this regression may mean that the relationship between DSP and client takes on special significance for a DSP’s sense of personal accomplishment. These results also suggest that working alliance is a valuable construct in understanding DSP burnout.

Summary

Examining all the regressions results yields an interesting pattern in the data. Adding each variable into the regression by itself allowed for exploration of which variable most predicts each burnout
indicator. Depression most strongly predicts emotional exhaustion. Perhaps this is unsurprising given that they are both intrapersonal variables. The intrapersonal depression predicts the intrapersonal emotional exhaustion most strongly. Although work functioning problems, an interpersonal variable, also predicts emotional exhaustion significantly, it does not have the same predictive strength. Further research is needed to determine if this is a true effect or just a result of shared variance.

Work functioning problems and working alliance are both interpersonal variables and both significantly predict depersonalization. Work functioning problems is the stronger predictor, which may mean that for depersonalization work relationships are more important than DSP-client relationships. Further research is needed to verify this finding.

Working alliance most strongly predicts personal accomplishment. This finding suggests that when DSPs and individuals with IDD agree on goals and tasks, and where there is a strong affective bond between them, DSPs experience personal accomplishment. This relationship is more predictive of personal accomplishment for DSPs than their work relationships and intrapersonal functioning. Further research is needed here as well to verify this finding.

**Implications DSPs and Supervisors**

DSP burnout is a serious problem for DSPs, the individuals with IDD they serve, and the organizations that employ them. Results of this study offer insights for all of these groups who hope to prevent or treat burnout for DSPs. The current study found that emotional exhaustion, depersonalization, and personal accomplishment have different patterns of relationship with depression, work functioning, and working alliance. Strategies for how to assist DSPs who score highly on the three subscales of the MBI are discussed in the following paragraphs.

**Working with Emotionally Exhausted DSPs**

The relationship between emotional exhaustion and depression suggests that DSPs and supervisors should first ensure that DSPs have access to mental health care to rule out or treat any
underlying psychological concerns. Those with higher rates of depression may not have the intrapersonal resources to manage the stresses of the job leading to emotional exhaustion. The relationship between emotional exhaustion and work functioning suggests that organizations should also pay attention to interpersonal work climate of emotionally exhausted DSPs. This is especially true if multiple members of the same team have elevated emotional exhaustion scores, which may be an indication of a poor interpersonal working environment. The poor interpersonal work environment may reduce the interpersonal resources that DSPs have to deal with the stress of the job. Innstrand, Espnes, and Mykletun (2004) studied an intervention for that was based on holding an opening meeting among DSPs and supervisees to explore ways that work stress could be reduced. In collaboration with DSPs, the researchers developed a list of problem areas and designed interventions to address them. Some of the interventions were on the individual level (e.g. an exercise program) and others were organizational (e.g. improving the performance appraisal system). At post-test, they found that this intervention process led to a reduction in emotional exhaustion compared to a control group. The intervention in this study utilized the working alliance principle of gaining agreement on tasks and goals. In other words, working alliance on the organizational level may relate to emotional exhaustion. Interestingly, they did not find similar results for depersonalization and personal accomplishment. Schaufeli & Buunk (2003) also found these two components of burnout to be resistant to intervention. The present study found a relationship between working alliance and both depersonalization and personal accomplishment. Based on these findings, future research could examine how working alliance impacts burnout when measured between DSPs, between DSPs and supervisors, and between DSPs and clients.

**Working with DSPs Engaging in Depersonalization**

Depersonalization is characterized by a callous and even cynical view of one’s client (Maslach et. al, 1996). If this kind of behavior is present, the relationship between depersonalization and work functioning suggests some possible interventions. Strained relationships at work may reduce the interpersonal resources that DSPs have to be engaged more positively with their clients. Although
interpersonal level intervention research has been sparse for this population, communication training has been shown to be effective with other populations (see for example Cohen & Gagin, 2005).

Because of the relationship between depression and depersonalization, DSPs and supervisors should also consider the role of mental health as an intervention for a DSP who is engaging in depersonalization. One such intervention was explored by Noone & Hastings (2011). They found that mindfulness training—particularly focused on DSP values—improved depersonalization scores. In other words, helping DSPs to clarify and commit to their values led to lower depersonalization. The intervention in this study was based on acceptance and commitment therapy (ACT). Further research should examine how ACT treatment and depression interact to decrease depersonalization.

The relationship between working alliance and depersonalization also suggests some possible interventions. In this instance, interventions could be focused on the role of the relationship with the client for DSPs who are engaging in depersonalization. When exploring the working alliance of a DSP with a client, the three components of working alliance—goal agreement, task agreement, and affective bond—can be examined. Evaluation, either formally or informally, of the agreement on tasks and goals with the client could provide some insight as to why DSPs depersonalize their client. Perhaps the frustrations of having competing goals or tasks has depleted the interpersonal resources needed to engage more positively with the client. Examination of the bond component of working alliance might also provide some insight about depersonalizing behavior. DSPs can then work to repair the bond they have with their client. Organizations could help train their DSPs to better engage with individuals with IDD or put them in situations conducive to bond experiences.

**Working with DSPs Lacking Personal Accomplishment**

The relationship between personal accomplishment and working alliance suggests that DSPs who have a good working relationship with their clients tend to feel a sense of accomplishment about their work. For DSPs with low personal accomplishment, an evaluation of their working alliance might
improve that outlook. Similarly, organizations could promote values related to good working relationships and train DSPs in collaborative task and goal setting. There is evidence that especially the task and goal components of working alliance can be taught (Crits-Christoph et. al, 2006). As with the other two components of burnout, mental health is a consideration for lack of personal accomplishment.

**Limitations of the Study**

There are several limitations to consider in this study. A lack of internal consistency scores on the TOP subscales limits what can be known about this data set and limit the usefulness of these scales in future research. The benefit of using the TOP is that it is a brief form that captures a wide variety of intrapersonal and interpersonal concerns. It has also had extensive research on both clinical and non-clinical samples, which mitigates the problem of not having internal consistency scores in this data set.

Another limitation of this study involved the truncated positive skew of the depersonalization scale. Although this is a known issue for the MBI-HS (Schaufeli & Enzmann, 1998), it does potentially affect the results on this scale. This highlights the need for a large sample size whenever the MBI-HS is used. This truncated scale probably contributed to the small departures from normality, linearity, and homoscedasticity. Even so, many of the results are significant at the .01 or even .001 level, which suggests that they can be trusted even with these limitations.

Another limitation of this study was similar to all studies where the measures were self-report. This is a threat to the validity because a lack of method variance may artificially inflate the correlations among variables. This is especially true for variables such as depression and emotional exhaustion that have already been shown to share variance (Schaufeli & Buunk, 2003). These results should be used as grounds for future research that incorporates mixed methods.

Another limitation of this study was that only one variable in each category (i.e. intrapersonal resources, interpersonal work-related resources, and client-related interpersonal resources) could be used.
The small to medium effect sizes in the regression are an indication that other variables are missing from the models in this study. Future research should aim for samples large enough to examine multiple intrapersonal and interpersonal variables.

One final limitation of this study was the homogeneous nature of the sample. This sample was taken near a major university, which may have inflated the number of DSPs who have higher levels of education. Because the demographic survey did not ask DSPs what kind of education they attained, it is not possible to determine which DSPs are working in their field and which have not. This may have an impact on depersonalization because, for example, a worker with a degree in an unrelated field might not have any additional resources than a worker with lower education levels. The sample was mostly female as well, limiting the generalizability of the sample for male DSPs.

**Recommendations for Future Research**

This study was designed to find evidence about the usefulness of working alliance in the field of ID services and with the population of DSPs. Having provided initial evidence that working alliance is a useful construct, future research should focus on expanding and delineating our understanding of working alliance for DSPs.

One way to expand our understanding of working alliance for DSPs is to conduct a study in which all three subscales of either the WAI-SR or the full WAI are explored for their connection to DSP burnout. Understanding which components of working alliance are most related to which components of burnout would increase the capacity to use working alliance to prevent burnout.

Future researchers should also consider utilizing observation to vary the method and thereby increase the validity of the findings. The working alliance inventory has an observer form for this purpose.
Finally, future researchers could consider using working alliance as an intervention for DSPs. Helping DSPs to consider how they are collaborating and bonding with their clients may improve their burnout levels—particularly depersonalization and personal accomplishment.

**Conclusion**

This study is among the first to examine how working alliance impacts burnout for DSPs. In fact, it is one of the first to explore working alliance in the field of ID services. The findings support the hypothesis based on the job demands-resource theory of burnout that working alliance predicts lower depersonalization and higher personal accomplishment for DSPs beyond depression and work functioning. This study also confirmed prior research about the impact of depression and interpersonal work-related resources on DSP burnout. DSPs who have higher depression also have higher levels for all three burnout subscales. DSPs who have higher work-functioning problems also have higher emotional exhaustion and depersonalization. These three predictor variables demonstrated that understanding burnout as a whole is a complex matter. No one variable or type of variable will explain the whole process. Researchers must continue to explore the many components that affect burnout for DSPs so that the problems associated with burnout will not have as big an impact on DSPs, the individuals they serve, and the organizations that employ them. Working alliance is a promising new construct in the field of ID services and offers new insight into the burnout problem for DSPs.
References


doi:10.1016/j.ridd.2013.01.012


doi:10.1080/19315864.2011.582230


doi:10.1111/j.1468-3148.2006.00311.x


Thompson, L., & Rose, J. (2011). Does organizational climate impact upon burnout in staff who work with people with intellectual disabilities? A systematic review of the
doi:10.1177/1744629511419616


Appendices

Appendix A: Working Alliance- Short Form T

Working Alliance Inventory

Short Form T

Instructions

On the following pages there are sentences that describe some of the different ways a person might think or feel about his or her client. As you read the sentences mentally insert the name of your client in place of ____________in the text.

Below each statement inside there is a seven point scale:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>Never</td>
<td>Rarely</td>
<td>Occasionally/Sometimes</td>
<td>Often</td>
<td>Very Often</td>
<td>Always</td>
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</table>

If the statement describes the way you always feel (or think) circle the number 7; if it never applies to you circle the number 1.

Use the numbers in between to describe the variations between these extremes.

Work fast, your first impressions are the ones we would like to see.

(PLEASE DON’T FORGET TO RESPOND TO EVERY ITEM.)

Thank you for your cooperation.
1. _____________ and I agree about the steps to be taken to improve his/her situation.

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<tr>
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<td>Never</td>
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<td>Occasionally</td>
<td>Sometimes</td>
<td>Often</td>
<td>Very Often</td>
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</table>

2. My client and I both feel confident about the usefulness of our current activity in counseling.

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<tbody>
<tr>
<td></td>
<td>Never</td>
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<td>Occasionally</td>
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3. I believe _____________ likes me.

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</table>

4. I have doubts about what we are trying to accomplish.

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</table>

5. I am confident in my ability to help _____________.

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</table>

6. We are working towards mutually agreed upon goals.

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7. I appreciate _____________ as a person.

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<td>Sometimes</td>
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<td>Very Often</td>
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</table>

8. We agree on what is important for _____________ to work on.

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9. _____________ and I have built a mutual trust.

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10. _____________ and I have different ideas on what his/her real problems are.

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</table>
11. We have established a good understanding between us of the kind of changes that would be good for _______________.

<table>
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<th>Never</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Often</th>
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12. _____________ believes the way we are working with her/his problem is correct.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Occasionally</th>
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Appendix B: Maslach Burnout Inventory- Human Services Survey

*Instructions.* Below are 22 statements of job-related feelings. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, indicate a “0” (zero) in the space before the statement. If you have had this feeling, indicate how often you feel it by marking the number (from 1 to 6) that best describes how frequently you feel that way.

<table>
<thead>
<tr>
<th>1. I feel emotionally drained from my work.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<tbody>
<tr>
<td>0 1 2 3 4 5 6</td>
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<table>
<thead>
<tr>
<th>2. I feel used up at the end of the workday.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<tbody>
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<td>0 1 2 3 4 5 6</td>
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<table>
<thead>
<tr>
<th>3. I feel fatigued when I get up in the morning and have to face another day on the job.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<tr>
<td>0 1 2 3 4 5 6</td>
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<thead>
<tr>
<th>4. I can easily understand how my clients feel about things.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<td>0 1 2 3 4 5 6</td>
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<thead>
<tr>
<th>5. I feel I treat some clients as if they were impersonal objects.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<td>0 1 2 3 4 5 6</td>
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<thead>
<tr>
<th>6. Working with people all day is really a strain for me.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
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<thead>
<tr>
<th>7. I deal very effectively with the problems of my clients.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
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<td>0 1 2 3 4 5 6</td>
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<thead>
<tr>
<th>8. I feel burned out from my work.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<tr>
<td>0 1 2 3 4 5 6</td>
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<thead>
<tr>
<th>9. I feel I'm positively influencing other people's lives through my work.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<thead>
<tr>
<th>10. I've become more callous toward people since I took this job.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
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<thead>
<tr>
<th>11. I worry that this job is hardening me emotionally.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<thead>
<tr>
<th>12. I feel very energetic.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
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<tr>
<th>13. I feel frustrated by my job.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
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<tr>
<th>14. I feel I'm working too hard on my job.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
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<tr>
<th>15. I don't really care what happens to some clients.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
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<tr>
<th>16. Working with people directly puts too much stress on me.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<td>0 1 2 3 4 5 6</td>
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<thead>
<tr>
<th>17. I can easily create a relaxed atmosphere with my clients.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<tr>
<th>18. I feel exhilarated after working closely with my clients.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<thead>
<tr>
<th>19. I have accomplished many worthwhile things in this job.</th>
<th>Never</th>
<th>A few times a year or less</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a week</th>
<th>A few times a week</th>
<th>Every day</th>
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<tbody>
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<th>20. I feel like I'm at the end of my rope.</th>
<th>Never</th>
<th>A few times a year or less</th>
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<th>21. In my work, I deal with emotional problems very calmly.</th>
<th>Never</th>
<th>A few times a year or less</th>
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<th>22. I feel clients blame me for some of their problems</th>
<th>Never</th>
<th>A few times a year or less</th>
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## Appendix C: Treatment Outcome Package

**TOP4.2 Adult CS**

David R. Kraus, Ph.D. © BHIL, 2004

**ENGLISH**

### Treatment Outcome Package

**IMPORTANT:** Before answering any question, please read the message on the back regarding the purpose and use of this information.

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**Indicate how much of the time during the past two weeks you have . . .**

1. been satisfied with your relationships with others
2. been satisfied with your daily responsibilities
3. been satisfied with your general mood and feelings
4. been satisfied with your life in general
5. felt too much conflict with someone
6. been emotionally hurt by someone
7. felt someone else had too much control over your life
8. had trouble falling asleep
9. had nightmares
10. awakened frequently during the night
11. had trouble returning to sleep after awakening in the night
12. had a paying job
13. had conflicts with others at work or school regardless of fault
14. missed work or school for any reason
15. not been acknowledged for your accomplishments at work or school
16. had your performance criticized at work or school
17. not been excited about your work or school work
18. physically hurt someone else or an animal
19. had desires to seriously hurt someone
20. had thoughts of killing someone else
21. felt that you were going to act on violent thoughts
22. felt no desire for, or pleasure in, sex
23. felt sexually incompatible with your partner or frustrated by the lack of a partner
24. felt emotionally or physical pain during sex
25. had trouble functioning sexually (having orgasms, ...)
26. had a racing heart
27. felt light-headed
28. had shortness of breath
29. had a dry mouth or trouble swallowing ("a lump in your throat")
30. had sweaty hands ( clammy) or cold hands or feet
31. had to do something to avoid anxiety or fear (washing hands, ...)
32. avoided certain situations due to fear or panic
33. felt panic in places that would be hard to leave if necessary
34. felt down or depressed
35. felt little or no interest in most things
36. felt guilty
37. felt restless
38. felt worthless
39. felt tired, slowed down, or had little energy
40. worried about things
This completes your participation in the study. Please take your completed packet to the front and make sure that you are entered for the drawing. Thank you very much for your participation!
Appendix D: Demographic Questionnaire

Questionnaire Directions:

As a direct care staff member, you are often faced with caring for challenging behaviors (e.g. aggression, violence, self-injur, etc.). Please think of some of the clients you served who may have experienced challenging behaviors.

Now, think about the individual that you remember most clearly.

1. How long did you work with this individual?
   - 1-2 months
   - 3-6 months
   - 6-24 months
   - Over 2 years

2. If the individual had an intellectual disability (i.e. mental retardation), how severe was their disability?
   - Mild
   - Moderate
   - Severe/Profound
   - Don't know
   - Not applicable

3. How long have you been working as a direct care staff member?
   - 0-6 months
   - 6-12 months
   - 1-3 years
   - 3+ years

4. Which of the following best describes your current role?
   - Habilitation or Residential direct staff
   - Manager or Supervisor
   - Nursing Staff
   - Peer Support Specialist
   - Administrator
   - Other

5. Your sex
   - Male
   - Female

6. Highest education you attained
   - High School
   - Some College
   - College Graduate
   - Graduate School Graduate
Now please complete the following 5 questionnaires. The first three ask you to think about the client you chose, and the final two ask you to consider some of your experiences in general lately.
Appendix E: IRB Approval

Date: May 20, 2016

From: Julie James, IRB Analyst

To: Jonathan Stube

Type of Submission: Initial Study

Title of Study: THE PREDICTION OF STAFF BURNOUT IN IDD COMMUNITY SERVICES BY STAFF INTRAPERSONAL RESOURCES, INTERPERSONAL WORK-RELATED RESOURCES, AND THE PROTECTIVE EFFECTS OF WORKING ALLIANCE

Principal Investigator: Jonathan Stube

Study ID: STUDY00005050

Submission ID: STUDY00005050

Funding: Not Applicable

The Office for Research Protections determined that the proposed activity, as described in the above-referenced submission, does not meet the definition of human subject research as defined in 45 CFR 46.102(d) and/or (f). Institutional Review Board (IRB) review and approval is not required.

The IRB requires notification and review if there are any proposed changes to the activities described in the IRB submission that may affect this determination. If changes are being considered and there are questions about whether IRB review is needed, please contact the Office for Research Protections.

This correspondence should be maintained with your records.
Appendix G: Original Informed Consent

Implied Informed Consent Form for Social Science Research
The Pennsylvania State University

Title of Project: Direct Care Staff Attitudes and Behavior

Principal Investigator: Michael Wolff PhD
333 Moore Building
Mxw102@psu.edu
(814) 865-2191

Co-investigator: Brian Rabian Ph.D.
314 Moore Building
Bar25@psu.edu
(814) 865-2191

1. Purpose of the Study: The purpose of this research is to look at direct care staff thoughts, beliefs and emotions related to the caregiving experience. Specifically, this study will look at affective experiences and thought processes in caregiving situations.

2. Procedures to be followed: You will be asked to review a consent form and a series of questionnaire. The questionnaires will ask you about your perspectives on caregiving for a specific individual that you identify. The study will take approximately 20 minutes to complete.

3. Discomforts and Risks: There are no physical risks involved in this study. The potential risks to you are no greater than would be experienced in a typical day and include discomfort, stress, or emotional reactions to some of the questions (such as reporting your own emotional reactions to another person). Please be aware that you may end the study at any time without loss of credit.

4. Benefits: The benefits to you include the experience of participating in this study, learning more about the research process, contributing to a larger body of psychological knowledge, and helping the field grow and develop further.

   The benefits to society include greater knowledge about caregivers thoughts, beliefs and emotional experiences.

5. Duration/Time: The study will take approximately 20 minutes to complete and is conducted in one session.

6. Statement of Confidentiality: Your participation in this research is confidential. In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared because your name is in no way linked to your responses.

   The Pennsylvania State University’s Office for Research Protections and Institutional Review Board, and the Office for Human Research Protections in the Department of Health and Human Services may review records related to this project.

7. Right to Ask Questions: Please contact Michael Wolff at 814-865-2191 with questions, complaints or concerns about this research. You can also call this number if you feel this study has harmed you. If
you have any questions, concerns, problems about your rights as a research participant or would like to offer input, please contact The Pennsylvania State University’s Office for Research Protections (ORP) at (814) 865-1775. The ORP cannot answer questions about research procedures. Questions about research procedures can be answered by the research team.

8. **Payment for participation:** Upon completion of the study, your corresponding number code will placed into a drawing for one of three $100 VISA gift cards.

9. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any time. You do not have to answer any questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty or loss of benefits you would receive otherwise.

You must be 18 years of age or older to take part in this research study.

Signing your name below indicates that you have read the information in this form and consent to take part in the research.

You may receive a copy of this form for your records or future reference before proceeding.

**Local Mental Health Resources**

**The Center for Counseling & Psychological Services (CAPS)**  
Penn State University  
221 Ritenour Building  
University Park, PA 16802  
(814) 863-0395

**The Psychological Clinic at Penn State**  
314 Moore Building  
University Park, PA 16801  
(814) 865-2191

24 Hour County Crisis Line  
1-800-643-5432

__________________________  
Signature  
__________________________  
Date
EDUCATION

**Ph.D. in Counselor Education and Supervision**
December 2016
The Pennsylvania State University

**M.Ed in Counselor Education**
Conferred May 2011
The Pennsylvania State University

**B.A. in Psychology**
Conferred December 2004

CERTIFICATION

- Pennsylvania Department of Education
  May 2011
- National Certified Counselor (NCC)
  May 2011
- Licensed Professional Counselor (LPC)
  June 2015

COUNSELING EXPERIENCE

**Therapist and Owner**
January 2016- Present
Jonathan Stube, M.Ed, LPC
State College, Pennsylvania

**Senior Staff Therapist**
June 2013- Present
Penn State Psychological Clinic
University Park, Pennsylvania

**Doctoral Career Counselor**
January 2013- May 2013
Penn State Career Services
University Park, Pennsylvania

**Doctoral Supervisor**
January 2013- May 2013
Penn State CEDAR Clinic
University Park, Pennsylvania

**Doctoral Counseling Intern**
May 2012-August 2012
Individual and Family CHOICES Program
State College, Pennsylvania

**Doctoral Practicum Counselor**
August 2011-December 2011
Penn State CEDAR Clinic
University Park, Pennsylvania

OTHER WORK/LEADERSHIP EXPERIENCE

**Clinic Supervisor**
August 2012-May 2013
Penn State CEDAR Clinic
University Park, Pennsylvania

**Chief Editor**
September 2011-January 2013
Rho Alpha Mu Newsletter
University Park, Pennsylvania

**Teaching Assistant**
May 2012- May 2013
Counselor Education and Supervision
University Park, Pennsylvania

**Graduate Assistant**
August 2011-May 2012
The SUMMIT Project
University Park, Pennsylvania

PRESENTATIONS/PUBLICATIONS

Wilson, K. B., Stube, J.E. (March 2012). *Falling short: Why understanding multicultural counseling competencies alone is not enough in addressing disability disparities.* Sponsored by the Virginia Commonwealth University, Race, Ethnicity, and Disabilities: State of the Science Conference, Arlington, Virginia [researcher]